The Canadian Chartered Accountant

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THE CANADIAN INSTITUTE OF CHARTERED ACCOUNTANTS

PTEMBER 1951

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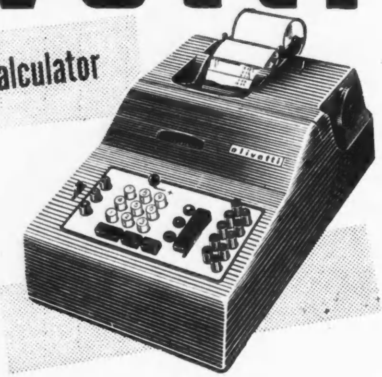

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The Canadian Chartered Accountant

VOLUME 59 SEPTEMBER 1951 NUMBER 3

COMMENT AND OPINION

The 49th Annual Meeting

IN the normal course of events this issue of *The Canadian Chartered Accountant* should reach readers' desks during the first week of September, at which time we ourselves (having written this comment on the last day of July) will be enjoying the beautiful alpine scenery and breathing the brisk mountain air of the Canadian Rockies at world-renowned Banff in bountiful Alberta. If that sentence is somewhat lyrically expressed, readers will understand when we say that the temperature in Toronto at the time of writing was somewhere near 90 degrees and that no matter how many windows we opened — and even with the aid of an electric fan — no breeze stirred. Whew!

Of course the annual meetings, and we have been to several of them now, are not roses all the way, though we do not deny that attending them is amongst the most pleasant of our duties. These annual meetings, the present one being the 49th since the Canadian Institute was formed in 1902, have probably done more than any other single factor in giving to our profession a national character and in establishing and maintaining uniform and rising standards of qualification and of practice. To these annual gatherings come chartered accountants from every Province and economic division of Canada and at them are discussed matters of professional concern, some of them the same year after year, others new. That these matters have found appropriate solutions seems apparent enough if one is to judge from the present strength of the profession throughout Canada and the high esteem in which the chartered accountant is held by the public. That ten separate Institutes of Chartered Accountants, one for each Province, could voluntarily unite in one national body and maintain uniform and high standards for so prolonged a period is deserving of comment, and is in very large part due to these annual meetings, of which this at Banff (oh! those cool mountain breezes!) is but the latest.

The Silent Profession

There was silence deep as death
And the boldest held his breath
(*Thomas Campbell 1777-1844*)

THESE lines describe with accuracy the reaction to the plaintive cry we uttered in these columns last June when we so earnestly besought at least a few of our nearly 10,000 readers to write in and let our contributors know what was thought of their contributions.

Net response: two letters, both expressly and emphatically marked NOT FOR PUBLICATION!

Apparently both of these gentlemen were less sanguine (and quite correctly so, as it turns out) than we ourselves were of the response to be expected to our request. One of them said, and we are grateful to him for it, that lack of

comment from our readers may indicate that they are too busy trying to practise what our contributors preach. The other (and he is a very eminent gentleman indeed), while expressing the hope that we might have some further reaction to our editorial, himself gave the reason why there hasn't been when he stated: "I am quite certain that it is not a lack of appreciation that accounts for the absence of comment but rather the general atmosphere that seems to prevail in our profession," which, he says, has always been known as a silent one.

It is perhaps some small consolation, if such be a true characterization of this profession, that we are in good company, and that like the Navy our silence is confined to words, not to deeds.

The Auditor's Report

BULLETIN No. 6 entitled The Auditor's Report, which has just been issued by the Committee on Accounting and Auditing Research, stresses the two fundamental characteristics of the independent accountant, integrity and independence. The Committee states that the independent accountant should not express an opinion upon financial statements unless he has made an examination of such a nature and scope as will enable him to express an informed opinion. The examination required to enable the independent accountant to express an opinion upon the financial statements must be determined by him in the light of the circumstances of each case.

To avoid the confusion which arises from mere differences in the wording of the auditors' expressions of opinion, the Committee has recommended a standard form of wording for the auditor's report for use in those circumstances in which he is expressing an unqualified opinion. The members of the Committee have agreed to adopt this recommended standard form of report in their practices.

The most significant recommendation in the bulletin is that the expression of opinion rendered by the independent accountant should cover the statements of profit and loss and surplus as well as the balance sheet.

We commend this bulletin, which appears on page 105, to the close attention of our readers.

U.S. Accountants and Lawyers Agree on Tax Practice

OUR American confreres and their friends in the legal fraternity have reached what has every indication of being a satisfactory solution to the difficulties which have beset them in the matter of income tax practice. Fortunately that is a problem which has not arisen and is not likely to arise in this country where relations between the two professions have always been friendly (perhaps more than that, for are they not the parents of a healthy 5-year old, The Canadian Tax Foundation?).

The American Bar Association and the American Institute of Accountants have announced their agreement on a statement of principles to govern the proper areas of practice by members of the two professions in the field of federal income taxation. The basic principle enunciated is that it is within the scope of both professions to prepare federal income tax returns, and the statement goes on to recommend that members of each profession encourage their clients to seek the advice of members of the other in appropriate cases. The two Associations also support the unanimous view of the National Conference of Lawyers and C.P.A.'s that local cooperating committees of the two professions be set up to discuss complaints involving tax practice against lawyers and accountants and to refer any problems to the National Conference of Lawyers and C.P.A.'s.

Bookkeeping Machines

By Graham A. Chambers, C.A.

Substantial savings will result through the use of the right accounting machine

A BOOKKEEPING machine may be defined as a machine that combines the operation of recording an accounting entry with the automatic accumulation of one or more totals of the items so recorded. There are, of course, many different makes of accounting machines and many different models of each make. Basically, however, they all have some or all of the following features:

1. A platen set-up that permits the simultaneous insertion of more than one type of accounting record and the necessary carbons. For example, in a payroll operation, the following forms and records would be processed in one operation:

Pay cheque,
Earnings statement,
Earnings record,
Payroll journal and cheque register.

Most machines provide for the insertion of the journal sheet from the back of the machine and the insertion of other forms from the front. This front feeding speeds the operation by reducing the distance the operator has to reach to make ready each posting.

2. A printing mechanism which may print numerals only or in the case of a typewriter bookkeeping machine both amount and description. Where no typewriter is included, symbol keys are provided to describe the entry and record the date. The statements prepared by the Canadian banks are prepared on numerical machines with symbols such as E.C. for error correction, etc.

3. One or more adding machines or accumulators which are used to total required figures as they are entered on the accounting record and to extend new balances where ledgers are being posted at the same time. The number of accumulators available ranges from 1 to 54 depending on the machine.

4. Changeable stop bars or a similar arrangement to permit the instantaneous utilization of the machine on more than one application.

Advantages of Machine Systems

Machine systems derive their principal advantages over hand systems by virtue of the following:

1. The ability to post transactions to two or more related records simultaneously.

2. The ability to automatically add, subtract, compute balances, and accumulate control totals while posting.

3. The ability to provide mechanical proof of accuracy.

4. The ability to provide automatic and mechanically controlled features which reduce operators' work and insure greater accuracy. The ability to record legibly a large number of routine transactions faster, more accurately, and therefore more economically.

At this point, it would seem advisable to point out certain differences between the mechanical and manual accounting methods. In the early stages of double entry bookkeeping all items were journalized in a two column journal and each item was individually posted to the appropriate ledger account. As transactions became more numerous the columnar journal was introduced which eliminated much posting that had become burdensome under the previous method. Because of the greater posting speed of a machine, the columnar journal loses many of its advantages and accordingly many machine systems are set up where no distribution is made horizontally in this manner. Instead, with the increased speed of posting, individual items can be posted to the ledger in some cases faster than these could be spread on a columnar journal. This in turn gives many advantages as it means that whereas horizontal distribution on a journal is limited to a practical number of columns, by separate posting the extent of the distribution is unlimited. In fact, columnar selection involving a large number of distributions has a tendency to reduce machine productivity. The number of totals provided by the machine and the provisions for horizontal tabulation are not, therefore, the determining factor in the selection of the best accounting machine for a particular job.

A Bookkeeping Machine Application

As an illustration of a bookkeeping machine application, one of many different procedures that could be used for the handling of accounts payable is presented.

1. This system is used by a company that has approximately 400 accounts and handles approximately 1000 to 1500 invoices per month. In addition, the same machine is used for posting all other accounting records except payroll.

2. Most invoices have at least two distributions and some as many as five or six.

As invoices are received they are numbered and approved in the usual manner for receipt of goods, prices, extensions, etc., and the accounts to be charged are designated thereon.

When a batch of approved invoices is accumulated they are sorted alphabetically and listed on an adding machine and then forwarded to the machine operator together with the adding machine tape.

The first machine operation involves the simultaneous posting of a remittance advice and a purchase journal. At the same time separate distribution tickets are prepared showing name of vendor, date, voucher number, account to be charged, and amount of charge. A separate ticket is produced for each charge on an invoice, by simply inserting a blank ticket in a slot on the machine provided for this purpose.

The purchase journal produced as a permanent record of the transactions entered provides the following columns: *Vendor name, Date of entry, Voucher number, Account charged, Amount of charge, Invoice date, Vendor's invoice number—optional, Amount of invoice, Account payable balance, 2nd pick-up, Proof.*

In this particular case the distribution ticket is inserted at the left of the machine covering the columns headed "Vendor Name" to "Amount of charge".

A separate line is required for each charge and the name is repeated on each line so that this information will appear on each ticket. As there is a carbon in front of the journal the information printed on the distribution tickets also appears on the journal sheet.

Proof of Accuracy

Through the use of certain features of the machine, proof of accuracy of posting is obtained as well as proof of the additions of the distribution.

When the distribution tickets are prepared, the amount entered on each ticket is added into two accumulators. One will give a total of all distribution tickets prepared. The other, called a cross-footer, is used to prove the posting. As mentioned, the amount of each distribution ticket is added in the cross-footer. When the total amount of the invoice is posted to the remittance advice, the amounts posted are totalled in a register for that column and when subtracted from the cross-footer total will be zero. When the previous balance on the remittance advice is entered in the machine, it adds into the cross-footer and the operator after extending the new balance re-enters the old balance which is this time subtracted from the cross-footer leaving zero. When the machine moves to the last column the balance of the cross-footer prints automatically. If all postings are done correctly the machine will print a zero. If an error has been made other figures will appear, necessitating a check of the postings. The only error that would remain undetected would be the insertion of the same wrong amount for the old balance both times it is entered. There is a column in the journal for the second pick-up but none for the first pick-up. This first pick-up is done "non-print" immediately prior to the insertion of the invoice amount at the right hand side.

Graham A. Chambers, C.A. was admitted to the B.C. Institute in 1949, having taken the silver medal and prize for placing second in Canada in the final examination. He is now with the firm of Helliwell, Maclachlan & Co., Chartered Accountants, Vancouver.

The down total of distribution tickets and the down total of invoices entered on remittance advices which are accumulated should agree and both should be the same as the pre-list. If such is the case, the invoices may now be filed.

The distribution tickets are now taken and sorted by account number.

When so sorted these tickets are posted to the individual expense accounts for each department. The distribution tickets may be posted individually or may be first summarized on an adding machine tape and the total only posted. In dealing with the preparation of tickets, it was mentioned that the name of the supplier was printed on the ticket. The tickets may then be posted individually and if space is made available on the ledger card a completely descriptive ledger is obtained for analysis at any time.

As a by-product of this posting operation a distribution journal is produced showing: *Date, Account charged, Vendor name, Amount of charge.*

In this plan when all tickets covering charges to a department are posted to the various sub-accounts the departmental expense control ledger card is inserted and the total of all postings to the detail cards is automatically extended therein. By entering the previous balance for expenses, the machine produces a card showing the to-date balance. As the machine accumulates a total of all items entered proof of accuracy of posting can be obtained by comparing this total with

the total of distribution tickets obtained in run number one.

In some cases preparation of duplicate descriptive ledger cards has been found of great benefit for issuance to department managers along with operating results. Through these, the manager is able to immediately spot any extraordinary items and relate his known costs to the totals reported to him.

The third phase of this installation is the writing of a cheque and the preparation of a cheque register. In this plan the name of the payee is inserted on the remittance advice and on the cheque itself prior to the first entry on the remittance advice. At appropriate payment times throughout the month the cheque and remittance advice forms are taken from the files and the discount is calculated. They are then forwarded to the machine operator who prepares the cheque by inserting it over the right hand portion of the journal sheet. The operator enters first the date, cheque number, gross amount, and the amount of discount as pre-calculated. The machine automatically deducts the discount and prints the set figure in the "amount of cheque" column. The machine then tabulates over to the left hand column where the name is entered. The operator then tabulates to the vouchers payable column in this case and again enters the gross amount. When the gross amount is entered on the cheque it adds in the cross-footer. When re-entered in the vouchers payable column it subtracts and the machine automatically tabulates to the proof column where the balance in the cross-footer prints. If the gross amount has been entered correctly in both places a zero will result proving the accuracy of the posting.

The cheque register has the following columns: *Payee, Voucher payable, Proof, Date, Cheque No., Gross Discount, Amount of cheque.*

The accumulated totals of the Vouchers payable discount and amount of cheque columns provide the figures for entry to the general ledger.

Flexibility of Machines

The flexibility of most typewriter bookkeeping machines provides a choice of many different methods of handling an application such as accounts payable. Depending on circumstances and the requirements of the company any of the following variations could be used:

1. An accounts payable ledger could be used instead of the remittance advice mentioned above. The chief disadvantage to this is that it is necessary to insert the ledger card to post the payment made to the vendor. Under the voucher system the cheque and remittance advice would merely be removed from the payable file.

2. If most invoices have charges to only one account, instead of preparing distribution tickets the invoices themselves may be sorted first by account to be charged and posted to the expense ledger. As a second operation they could be resorted alphabetically and posted to the accounts payable ledger.

3. Where a large proportion of the invoices are chargeable to only one account, such as inventory in the case of a manufacturing company, all the invoices chargeable to this account could be segregated and sorted alphabetically. The total of all these invoices which is accumulated as they are posted to the accounts payable could then be charged to the inventory account in the general ledger.

4. With a wide carriage machine it is possible to post the debit side of the entry to the expense ledger and journal on the left portion of the carriage and by tabulating over to the right hand side post the amount to the account payable ledger card. Normally this is considered

to be a slower operation than the dual run plan described in (2) above, as not only does the operator spend more time locating the right ledger or expense card but also, because multiple postings to the same card are not as frequent, more time is spent entering old balance figures in the machine.

5. In some cases it is not convenient to prepare cheques on the accounting machine and under these circumstances the cheque register is prepared on the accounting machine from either a carbon copy of the cheque or from the cheque stubs.

Other Applications

While the above describes an accounts payable application of a typewriter bookkeeping machine, most machines of this type are adaptable to many different applications, some of which are:

1. Accounts receivable — including preparation of statement, ledger card, cash receipts journal, sales and sales distribution journal.
2. Payroll — including simultaneous preparation of earnings statement, cheque, payroll register, and employees' earnings record.
3. Inventory records — including journal and perpetual inventory cards.
4. Cost records — including work in process ledger, journals, etc.
5. Fixed asset and depreciation ledger.
6. General ledger and general journal.

Special Purpose Machines

Listed below are a few of the special purpose machines available and the jobs performed by each.

1. A billing machine including all the features of a typewriter accounting machine and in addition having a multiplying mechanism which automatically calculates and prints extensions and totals as an operator prepares invoices, etc. The quantity is entered in the first multiplier and printed simultaneously. The description is entered on the typewriter and the price is entered in the second multiplier. As soon as this price is entered, the machine makes the extension and prints both price and result. The results are accumulated so that one key depression totals the invoice when all items are entered. As more than one accumulator is available, quantities may also be totalled where a uniform product is sold.

2. One manufacturer provides a key punch that can be attached to a billing machine so that punched cards are produced simultaneously with the writing of the invoice for various analysis purposes.

3. An analysis machine is available that has 54 accumulators so that a group of items such as sales invoices can be distributed to as many as 54 accounts in one run by listing and punching the related account key. By totalling each of the 54 registers the distribution can be obtained.

4. Specialized payroll machines designed for high speed preparation of earnings statement, record, pay cheque, and payroll journal.

5. Cycle billing machines that post a customer's statement in detail and automatically post only the totals of the month's debit and credit transactions to a customer's history card inserted in the machine.

6. Various high speed posting machines such as those used in banks where a large number of similar transactions must be handled. One very successful bank plan provides for two runs on all entries. One girl posts a batch of entries to the ledger cards and the same batch is posted by another operator to the statements. By

accumulating the total of all items posted and comparing the two runs the accuracy of the posting of the entries is proved. To prove that the correct account has been charged or credited a total is accumulated of all new balances extended. If this total for both runs is the same it can be assumed that the entries have been made to the correct accounts as it would be quite a coincidence if two customers, who might be confused, had identical balances.

7. Various combination cash register accounting machines such as window posting machines for hotel or retail use. Instalment sales and payments are frequently handled on a machine that posts a ledger card, customer's passbook, and journal sheet simultaneously, producing totals when required.

Substantial Savings

To summarize, the machine companies have produced a large variety of accounting machines ranging in price from approximately $700 to $7,500 designed for various accounting applications and in most cases adaptable to many different jobs. In these days of high labour costs there is no doubt that substantial savings can be effected through the purchase of the right accounting machine and the installation of the best possible procedures for handling the work involved.

Answering Examination Questions

By Clem L. King, B.Com., F.C.A.

Some useful last-minute advice for those soon to write the October examinations

WHILE some candidates sit for the examinations without the proper preparation, there are others who do have an adequate knowledge of the subject but who do not do themselves justice in the examination room. As in any endeavour, there is no "easy road" to success in examinations. The prime essential for success in examinations is an adequate knowledge of the subject. This cannot be obtained by leaving all studying to be done during the last few weeks before the examination. Preparation for the examinations should start as soon as possible. For chartered accountancy students study should be a continuous process from the time they start in a chartered accountant's office until just before the examination. Most students will enter the examination hall better prepared to do their best if they arrange their study programme so that it is completed well in advance of the date of the examinations. The intervening period can then be used profitably in reviewing topics needing particular attention. The last few days should be devoted, so far as is possible, to mental and physical relaxation.

Perfection of Examination Technique

An excellent way to condition oneself in the technique of writing examinations is to work out, under simulated examination conditions, questions that have appeared on the examination papers of prior years. The answers should then be gone over carefully noting the points that were missed, the irrelevant material included, the clarity of presentation, and particularly the points upon which the grasp of the subject is not up to standard. Such a procedure is an excellent method of reviewing the subject matter of the course, but it should not be forgotten that the questions on past examination papers will not necessarily cover all the topics included in the subjects upon which the examination will be based. If the help of a qualified person can be secured to review the answers worked out and to offer criticism it will usually prove helpful.

Precision in Words

Unfortunately there are some people who have a good grasp of a subject but are not able to make others aware of the extent of their knowledge. One reason for this is their inability to use the language as a medium of communication. This deficiency cannot be remedied overnight and undoubtedly has its roots in the education process of a person's earlier years. However, any person can improve his capacity to write understand-

able English by practice. After writing a letter, a lesson assignment, a report, or an answer to an examination question, reread it critically to make sure that the language used will convey to the intended reader the thoughts meant to be expressed.

In all writing try to choose the word that will convey the exact meaning intended. Simple English is simple only if the right words are used, whether the words are one or five syllables in length. It is simple only if it readily conveys to the reader the exact shade of meaning intended.

Some persons produce a so-called handwriting that, while the right words are used, is impossible to decipher because of complete inability to recognize any similarity between the hieroglyphics used and the ABC's of the alphabet. In answering examination questions the student should make sure that his writing is legible, not only out of pity for the poor examiner, but in his own self interest.

Selecting the First Question

Once a candidate has entered the examination room and received his paper, the next step should be to get to work immediately in order to make the best possible use of the available time. He should first glance over the paper, noting the topics covered by the various questions and the answers called for by the requirements of the questions. He should note the marks allotted to the various questions since these offer a guide to the relative importance of the questions. If a question has been allotted 5% or 10% of the marks, it is not expected that the candidate will spend a quarter of the available time in answering it. Conversely, if a question has been allotted 25% or 30% of the marks, it is not anticipated that a candidate can answer it in 10 or 15 minutes.

There are several schools of thought as to which is the best method for candidates to follow in selecting the first question to answer. Some believe that the candidate should read the whole paper over carefully, making notes of the important points that come to mind, and, having done this, decide on the question to be tackled first. Others believe that this is too time-consuming and that all that is needed is a brief scanning of the topics covered and the requirements in order to select the question to be answered first. Each candidate should experiment in advance of the examination session to find the method best suited to his temperament and then, in the examination hall, follow the procedure that is most productive for him.

After a candidate has selected a question and noted the marks allotted to it, his next step is to read the question and the requirements with sufficient care to ensure that all the points in the question have been noted correctly. A good rule is to glance over the question to get an idea of the topic covered, read the requirements, and then read the question from the beginning. As the question is read, notes should be made of points that should be taken into account in the answer. In reading the question, it should be taken for granted that the question and the requirements mean exactly what they say, no more, no less. Great care has been taken to avoid ambiguities in wording and to state the problem as clearly as possible.

Answer the Question Asked

Some candidates lose more marks through their failure to read the questions carefully than through any lack of knowledge on their part. An examination paper can only cover some of the aspects of any given subject. The examiner is interested in the extent of the candidate's knowledge of the points ask-

ed. It should always be remembered that no matter how well the candidate may know the subject, the only way the examiner has of assessing the extent of the candidate's knowledge is by evaluating the information, relevant to the questions asked, that the candidate has included in his answer.

If the question calls for a discussion on a topic, the answer should set out the points involved, explaining their relative importance and indicating the possible divergent viewpoints and the implications of the problem. If the question calls for an answer set out in the form of a letter, the answer should be submitted in that form and should be as nearly as possible the letter that the candidate would like to see go out to a client who had asked the same question. If the question calls for a balance sheet, a statement of profit and loss, or some other statement, the answer should be in statement form, properly headed up and arranged in the form that the candidate would like to submit to his principal for criticism. If, on the other hand, working papers are called for it is not necessary, in fact it is a waste of time, to go to the trouble of preparing the answer in statement form, for the examiner wishes to see if the student can prepare the working paper called for. In all cases, the candidate should answer the question asked and submit his answer in the form called for.

After completing about half of the answer to a question, it is good practice to review the question and read over the answer to make sure that it is still as planned and actually in answer to the question asked.

Interpret the Questions Carefully

Instances arise where candidates become deeply and unnecessarily involved in answering a particular question because they refuse to believe that the question means exactly what it says or is as easy as it appears. It should be remembered that not only is great care taken with the wording of the questions but what is difficult for one person may be easy for another. If a candidate thinks that a question is too simple and easy to be included in an examination paper he should remember, after first making sure that he has not misinterpreted the question, that some other candidate probably finds that same question almost as difficult as he finds it easy.

Conversely, if a question seems unduly complex and involved, the candidate should first make sure that he has interpreted it correctly. While some questions may be difficult, the examiners try to present them in such a way that they are not unnecessarily intricate and involved. It may be that the question covers a point on which the particular candidate's knowledge and experience is below average.

Be Careful in Making Assumptions

If, after starting to work out an answer, the candidate finds that some assumption seems to be necessary if he is to complete the question, he should first reread the question to make sure that he has not overlooked the point that appears to be missing. Should he not find what he seeks, he should then make the assumption which seems most reasonable in the circumstances and indicate on his answer sheet the basis upon which he has answered this question. It is possible that the question was designed to draw an assumption from the candidate, but if it should prove that there was an ambiguity in the wording of the question, those students who have set out their assumptions clearly will be in the best position to have their answers given full weight.

If the assumption is clearly set out, the examiner is in a position to award the

candidate the maximum marks possible, even though it was arrived at as a result of misinterpreting the question or was not strictly correct. The candidate should be careful to make sure that the remainder of his answer follows logically from the assumption made. One of the more common mistakes made by candidates is the failure to follow their own work and thinking through to a logical conclusion.

Futility of "Padding"

Some candidates, particularly those whose grasp of the subject is not up to standard, attempt to impress the examiner by the sheer volume of their answers. This padding serves only to waste time that could be more profitably used in answering other questions on the paper. Unless the answer is required to be in a specific form it is wise to set out the answer, where possible, in point form. Not only does this assist in making sure that all points are covered, but it makes it easier for the examiners to find the points brought out in the answer.

Most candidates fall into the error of including in their answers material that is not relevant to the question asked. This habit is difficult to overcome but should be guarded against at all times. It is not only a waste of time but frequently results in the candidate contradicting himself.

Insufficient Time

There are often ways of shortening the time required to prepare a proper answer, such as using the examination paper itself as a rough work sheet and thereby avoiding unnecessary copying. If such short cuts are used, the examination paper or other work sheets should always be handed in as part of the answer papers.

If the candidate finds that he is not going to be able to complete the paper in the time allowed, he should attempt to put down on his answer sheets the points, or at least the main points, to be considered in answering the incompleted questions. If this is done and the candidate covers the main points in the question, the examiner will be able to allot marks in proportion to the candidate's displayed knowledge of the topic. If it is a question in which working papers have to be prepared and calculations made, the layout of the answer should be sketched, if possible, and as much work set out, without completing the details of calculations, as can be done in the time available. While a candidate cannot secure full marks on a paper if he is not able to complete several of the questions, it is possible to secure a pass if he indicates on his answer sheets that he has a proper grasp of the fundamental points involved in those questions that he has not been able to complete.

A Reminder

On entering the examination room the main thing to remember is that if adequate study and preparation have been completed, the questions on the papers can be properly and competently answered by a judicious mixture of acquired knowledge and common sense.

Control of Assets
(Concluded)

By W. G. Leonard, F.C.A.
Assistant Professor of Commerce, Queen's University

This is the third of a series of three articles on this subject. The first provided a general introduction of the topic and a discussion of techniques of control over acquisition of cash. The second concluded the discussion of cash control and dealt with techniques of control over receivables and acquisition of inventories. This article will conclude the discussion of inventory controls and will deal also with control of investment securities and long-term assets.

3. Inventories or Stock-in-Trade

(b) Custody of Inventories

It is usual to classify inventories under the following headings: (i) materials and supplies (ii) goods in process or work in process and (iii) finished or manufactured goods. In most manufacturing plants of any size, it is likely that a formal system of stores control will be operated for many types of materials and supplies and also, in many cases, for the finished goods inventory.

However, it is seldom feasible to employ a formal storing and issuing procedure for the work in process as this work moves from machine to machine or from stage to stage. Other methods of control must be used such as that secured by a good system of cost records which will develop cost comparisons from period to period as compared with standards of reasonably efficient performance and so indicate abnormal wastages or abnormal use of materials or machine or labour time in the productive departments.

Formal systems of stores control serve the following purposes and furnish the following advantages in cases where their use is appropriate and economical:

(i) They provide focal points for the personal responsibilities having to do with the receiving into the plant and the distribution to various plant departments of the materials and supplies (or with the custody and shipping of finished goods).

(ii) They furnish a guide to the orderly purchasing of materials and supplies.

(iii) They tend to prevent careless handling and theft of goods.

The first advantage, i.e., the establishment of well-defined personal responsibilities, is obtained by setting up a stores department or a finished goods warehouse in a definite physical location. A storeskeeper or custodian is appointed and given definite personal responsibility for the control, record-

ing, and custody of goods in certain well-defined categories.

The second advantage (furnishing a guide to purchasing) is obtained by operation of continuous inventory records by the stores department. The inventory record is kept separately for each type of goods and shows (a) quantities received, (b) quantities issued, (c) balance representing quantities on hand, (d) pre-determined maximum quantities permitted to be on hand at any one time, (e) pre-determined minimum quantities below which stock is not to be permitted to drop without requisitioning for a new purchase. Whenever any issue of goods reduces the stock of that particular item to a figure lower than the set minimum, it becomes the duty of the storeskeeper to notify the purchasing official or department of the quantity which should be purchased in order to bring the stock up to the permitted maximum. The third advantage, i.e., the prevention of careless handling and theft, is gained by enclosing the stores area to prevent entrance or exit except through a controlled space and by enforcing a rule that goods are to be issued only on written orders or requisitions from authorized persons which requisitions are to be retained on file as a permanent record. Similar precautions should, of course, be taken with regard to the finished goods warehouse. As one business manager of my acquaintance put it, "It is not wise to have too many back doors to any place where goods are stored."

A special problem of control arises in those plants where the type of work makes it necessary to supply the workmen with a considerable variety of loose tools whose aggregate value make it desirable to try to minimize the risk of loss. Perhaps the best method of control here is use of the so-called "tool crib". Each employee is required to submit a written requisition for the tools which he himself has to use. He is made personally responsible for the tools issued to him and their value is charged to his personal account. He is held responsible for their ultimate return at which time his account will be credited with a cancellation of the charges originally made with respect to the tools returned. It is usual to make provision for supplying the employees with locked cabinets in which they can store the tools when not in use.

(c) Utilization of Inventories

I have already dealt with the stores procedures which are designed to make sure that materials and supplies bought for business purposes actually are used for the intended purposes. A separate problem is that of trying to make sure that wastage or spoilage of materials is not too high in the productive departments.

Perhaps, the most effective control procedure here is the development of comparative cost figures for various processes or units of product over short time periods such as a day, a week, or a month. Without going into the detail of cost accounting techniques, perhaps I may say that management is well advised to establish pre-determined standards of performance representing acceptable rates of consumption of materials and supplies per unit of product. Then the cost accounts can be designed to produce figures known as variances which will reflect accurately any tendency towards abnormal materials consumption as compared with the predetermined standard.

A special control problem arises in many industries in connection with disposal or utilization of waste and scrap materials or of by-products arising out

of the production process. Some productive processes give rise to waste materials which have little or no saleable value and whose removal merely involves the business in additional costs. Examples are chips in a cut-stone works, or cinders in a power plant. These waste materials accumulate as an unavoidable incident of the plant operation and involve out-of-pocket expense for dumping. Other productive processes throw off waste materials which have a saleable value as scrap, i.e., they may be taken out and sold in bulk without any further processing. Examples are shearings in a sheet-metal works or cuttings in a garment factory. Usually the amount of money recoverable from the sale of scrap materials is small in comparison with the cost of a similar quantity of the material from which it originally arose. However, its recovery may represent in total a considerable cost saving, for the business and management should devise methods of making sure that the quantities of scrap materials sold represent a reasonable recovery with relation to the quantities of materials used and the nature of the production process. Often it may be possible for a greater relative return to be obtained from scrap materials by further processing them into by-products in a minor or side-line production effort. Sometimes this may be done in order to get a more efficient utilization of some plant facilities which otherwise would stand idle part of the time. Examples of production of by-products from waste materials would be use of the shearings in a sheet-metal works to manufacture metal washers or use of the cuttings in a garment factory to manufacture rugs or rag dolls.

I already have indicated that good internal control of materials and supplies and of finished goods involves the operation of continuous stock records of quantities of each important item handled. Also that control of costs of inventories of goods in process and finished goods involves operation of a system of cost accounts which will bring out comparisons to indicate subnormal or inefficient performances anywhere within the productive departments. Both the continuous inventory records and the cost accounts should be tied in with the general books of account by a device known as subsidiary ledger and control accounting which provides that the detailed records have to be proved periodically by reference to the totals of the transactions as recorded in the books of account. This is usually done by taking a monthly trial balance of the subsidiary ledger, which trial balance must be brought into agreement with the controlling account.

Another important control procedure involves the taking of a complete physical inventory of the stock-in-trade at least once a year. This requires not only the physical count or measurement of the quantities of goods on hand but also the pricing or translation of the count into dollars representing the cost of the goods on hand minus any reductions deemed necessary for any goods which by reason of inferior quality, changes of style, physical deterioration, etc. are likely to be sold, if at all, at prices which will not yield the usual mark-up on their cost.

The physical stock-taking may be done in one of two ways:

(i) The most common procedure is to make a complete count of the inventory of a company, a plant, or a department at one definite time while the productive operations are suspended for the purpose of the stock-taking.

(ii) An alternative procedure may be practicable in some plants where adequate and accurate book inventories are maintained. This procedure consists of making periodic counts under controlled conditions of selected items according to a plan or pattern by which all items in the entire inventory will be covered at least once a year. Some businesses employ both the periodic test counts of selected items and the year-end stock-taking of the entire inventory.

In either case, the results shown by the actual physical stock-taking are compared with the corresponding figures in the continuous book records of inventories for the purpose of ascertaining what errors have occurred in the book records and of obtaining their correction. The continuous book records must be adjusted to show the actual quantities of goods found to be on hand.

In connection with both types of inventory count, considerable careful planning is required in order to obtain a satisfactory cut-off of the records made in the books concerning goods received and goods shipped so that the book records will be on a basis which will reflect the actual point of time when the count was made. It is necessary to lay down detailed instructions for both the bookkeeping employees concerned and the inventory counting teams.

The precise time of the annual stock-taking should be given careful consideration. It is desirable to minimize the length of shutdowns of operations for the purposes of stock-taking and most desirable not to have any shut-downs at all during the busy season of any business whose productive activities follow a seasonal pattern. Any business which is subject to a seasonal lull or slack season is well advised to adopt a financial year-end and to plan its annual stock-taking to coincide with the time of reduced activity. This is one of a number of important advantages which businesses may derive from adopting a natural business year in preference to the calendar year for their financial reporting.

A problem closely related to custody of inventories is that of fire insurance thereon, but as I plan to deal with this topic under the general heading *long-term assets,* I will not deal with it separately under this particular heading.

Perhaps I should place a little more emphasis than I have done so far on the purely accounting devices of inventory control. I have already indicated that the most efficient method of controlling materials and supplies inventories is based on good stores procedures and that these same procedures also are most efficient for those types of finished goods inventories which lend themselves to this type of control. However, thorough-going stores procedures may be unduly expensive to operate in connection with those inventories which consist of large numbers of items each having a small unit value.

In most cases an important part of the stores procedures is the operation of continuous stock records which show the number of units on hand and the unit costs of each type of goods. Where the type of goods handled is such that the cost of each unit is a material amount and the risk of monetary loss to the business from theft, breakage, etc. would be considerable in the absence of a comprehensive system of control, there is usually little doubt that the additional administrative costs imposed on the business by operation of complete stores procedures are fully warranted. However, in cases where the types of goods handled are such that the risks of loss are relatively slight, or in cases where the unit

costs of items which are likely to be lost are relatively small, there may be considerable justification for doubts as to whether the cost of full protection will not be so much greater than any reasonable risk of loss that the management would be unwise to incur the costs of full protection.

This is the sort of situation which invites the exercise of ingenuity in devising some method of control that will yield most of the important advantages of detailed stores procedures without incurring the heavy costs of detailed bookkeeping which may be involved in putting these procedures into operation. Perhaps it might be useful to indicate the general nature of one type of practical compromise between considerations of efficient control and considerations of administrative cost in this general area.

The continuous inventory records of various types of goods consist of two types:

(1) The detailed records or stock cards which show quantities received, quantities issued, and balances remaining on hand for each type of goods handled. These quantities commonly are priced at unit cost and the total cost values are filled in for each receipt of goods and each issue of goods in order to provide periodical proof of agreement with the books of account which are kept in terms of dollars and cents.

(2) The cost accounts operated in the ledgers of the business which represent the totals or controlling accounts of the various classes of costs which are recorded in detail on the individual stock cards. In the technical language of bookkeeping the stock cards are the subsidiary records and the cost accounts are controlling accounts against which the accuracy of the subsidiary records may be proven periodically.

Obviously, the bulk of the detailed bookkeeping work and the major part of its cost will be incurred in the operation and periodical balancing of the individual stock card records. Therefore, if means can be devised to operate the cost accounts in total only, without the necessity of operating the detailed stock records in order to prove their accuracy, it is apparent that a considerable reduction can be made in the bookkeeping costs. One device for doing this is to provide estimates of the amounts of materials which should be used for certain quantities of product under reasonably efficient operating conditions and to write up the records as if these standard quantities represented the actual consumption. Then when an actual physical count is taken at the end of a period, a comparison is made in total between the quantities which might reasonably have been expected to be used and the actual performance which was obtained. This method cannot be expected to turn up a ready-made explanation of the reasons for the differences between the pre-determined standards and the actual performances which are bound to turn up at the end of each period. However, the differences may be sufficiently small for most periods as to be considered relatively unimportant. When, for any period, a variation *is* shown which is sufficiently large to cause concern, special investigation may be made of the probable causes in order that appropriate remedial measures may be taken.

(d) Sale or Disposal of Inventories

The end-product of the production process is the finished goods inventory and the ultimate purpose of the process is to have the proper types of finished goods ready for sale in such form and at such a price as will satisfy the requirements of the prospective customers

of the business and as will induce them to buy sufficient quantities to enable the business to earn a profit from their sale.

Many businesses have a separate sales department and a definite policy of sales promotion. Formulation of sales policy may be less subject to formal control in many businesses than are some of the other major efforts. On the other hand, many modern businesses make extensive use of budgets and where this is done, it is necessary for the following basic policy decisions to become a matter of formal record as between the sales department and the budget control committee:

(i) products and services to be offered for sale;
(ii) physical volume of sales to be sought;
(iii) price policy;
(iv) credit policy;
(v) nature and amount of sales effort.

The starting point of the entire budgeting procedure and the basic document to which all other forecasts must be related will, in most cases, be the sales budget or sales forecast. I do not propose to go very deeply into the technique of budgeting. I will just mention the different topics which must be considered in the thoughtful preparation of a sales budget:

(i) analysis of past sales performance of the particular business;
(ii) study of indications of trends of business conditions generally;
(iii) study of market potentialities;
(iv) consideration of products or services to be offered;
(v) consideration of prices to be set;
(vi) consideration of agencies, channels, and methods to be used in making sales;
(vii) formulation of sales policies in general terms;
(viii) development of detailed sales plans;
(ix) development — in detail — of sales standards and incentives;
(x) development of methods of sales control;
(xi) development of a program of selling costs.

In all of these steps, the question of sales revenue and of the costs of obtaining sales must be considered jointly. It is not so much a question of what *has been* sold or even of what *can* be sold, as it is of what can be sold *profitably.* Any analysis of sales possibilities which is to be fruitful requires a continuous relating of sales to costs in order that the policies chosen shall be those which will tend to maximize the profits of the business.

4. Investment Securities

(a) Acquisition of Investment Securities

Manufacturing or trading businesses are likely to acquire investment securities for one of two purposes:

(i) as a temporary repository of cash in a situation where the business has more cash on hand than its immediate requirements but wishes to retain its command of ready cash either as a cushion against possible or anticipated increases in its working capital requirements or as a source of funds for planned future expansion of productive facilities;
(ii) an investment which accomplishes some definite business purpose as, for example, purchase of securities effecting control of a supplier business in order to assure an accessible supply of raw material, or purchase of control of a competitor business for the purpose of strengthening the competitive position of the business within the particular trade or industry.

For the first type of purpose, the business is likely to buy securities which will be readily marketable and are quoted on the recognized securities exchanges.

Control over acquisition of securities will usually be effected by requiring formal minutes of the board of directors to authorize each purchase. The actual purchasing procedure will be similar to that already prescribed for purchases of materials and supplies.

(b) Custody of Securities

Good internal control of investment securities usually is based on a clear-cut division of duties between those employees entrusted with custody of the securities and those who keep the book records. The securities should be registered in the name of the business at the time of purchase. It is desirable to keep the actual documents evidencing ownership in the securities in a safety-deposit box or fire-proof vault. Access to the place of safe-keeping should be vested in at least two responsible persons at least one of whom should be an officer of the company.

(c) Utilization of Securities

With respect to all revenue earning securities, a schedule should be prepared showing the dates and amounts of interest maturities, dividend declarations, etc., which the business should receive as revenue from its investments. This schedule should be kept amended up to date whenever any security holding is changed, whenever notice of a dividend declaration is received, or whenever any other event happens which affects the amounts of revenue which the business should receive. A copy of this schedule and of all amendments thereto should be furnished to the bookkeeping department which should be required to use the schedule as a check-list against which entries representing actual receipt of the anticipated payments will be ticked off. If an expected payment is not received, the reason should be investigated and a formal report made to the responsible official.

Marketable securities owned by the business are commonly used as security for the borrowing of money from banks as required for temporary or seasonal financing. In such a case, the securities are left in the custody of the bank for the duration of the loan and the business receives a signed acknowledgement from the bank which should be kept in safe custody in the same manner as other important business documents.

(d) Disposal of Securities

Sales of securities, like purchases, should be formally authorized or approved in formal minutes of the board of directors or of a properly authorized investment committee. The treasurer of the company or his assistants should ascertain that the sales are executed in proper form under the corporate seal of the company. Also, he should make sure that the proceeds from sales are duly received and deposited promptly into the banking account of the business.

5. Fixed Property and Other Long-Term Assets

(a) Acquisition of Long-Term Assets

Under the general heading, long-term assets, are grouped all the land, buildings, plant machinery, office furniture and equipment, delivery equipment, etc., of a business plus any so-called intangible assets such as patent rights or goodwill which the business may have acquired by purchase.

In some cases the acquisition of a long-term asset by a business will represent an outlay of a new kind, for example, the purchase or construction of a new property or new productive unit which the business did not possess before and which represents a net addition to the physical properties or productive

facilities of the business. In other cases the acquisition of a long-term asset will merely represent the replacement of an older long-term asset which has been retired by a newer and more modern asset of the same sort.

In the case of a policy decision to acquire or construct an entirely new plant or factory, the selection of a location may become an important problem which is influenced by the following factors:

(i) availability of markets;
(ii) nearness to raw materials;
(iii) availability of labour;
(iv) power;
(v) climate and physical conditions.

The procedures by which the management of a business can control the fixed property of the business will usually include the following:

(i) A construction expenditure budget, approved by formal action of the board of directors, showing the allocation of funds to cover anticipated plant expenditures for a definite period — usually a year.

(ii) A system whereby approval in advance is required for the actual awarding of the contracts covering the specific projects contemplated in the construction expenditure budget. This approval may be delegated to different levels of authority depending upon the size of the proposed expenditures. For example, it probably is better to give each of the department heads in a plant a certain budget and to permit him to place the purchase contract for a new item of equipment, such as a wheelbarrow, on his own personal responsibility, whereas for the building of a new power dam or a new development railroad, it would be wise to require formal action of the executive committee of the board of directors in conjunction with the general manager.

(iii) Maintenance of adequate property records — in order to make wise decisions, it is necessary to have the facts readily available.

(iv) Procedures and printed forms governing the initiation of requests both for new acquisitions or for retirements of long-term assets. A procedure should be laid down for review and consideration of these requests with a view to their rejection, postponement, or approval and consequent inclusion in the construction expenditure budget.

(v) A clear-cut policy distinction between replacements of entire plant units and those expenditures which are deemed to be in the nature of repairs and maintenance of existing plant units.

(vi) Periodical or occasional taking of a physical inventory of property, plant, and equipment and its comparison with the book records. This inventory may be taken by an independent appraisor and used to determine current replacement value of the assets for fire insurance purposes.

In many cases, the acquisition of new items of equipment coincides with the scrapping or other disposal of older items of equipment which the new acquisitions replace. Long-term assets presently in use may have to be replaced for any of the following types of reasons:

(i) Equipment is worn out — usually replacement for this reason will occur before the equipment is actually out of action. The need for replacement will be evidenced by the gradually increasing costs

of interruption and of maintenance. It may be occasioned by the increasing hazards of serious accidents or dangers of costly interruptions of service.

(ii) Present equipment does not have sufficient capacity for most efficient production required by the present-day needs of the business. This may have reached the point where the equipment has been rendered obsolete by technological advancement and should be scrapped. Alternatively, the equipment may still be reasonably useful for some purposes, but more efficient equipment may now be available which might produce at lower unit costs, having regard to the peculiar needs of the business.

Often the policy decision as to whether or not to go ahead and scrap the old equipment and instal the new is an extremely difficult one to make. It may be assisted by a study of comparative advantages and disadvantages along the following lines:

Step 1.—Obtain an estimate of the complete cost of the proposed installation including all costs of putting it initially into actual operating condition in the proposed location. Obtain also an estimate of the net salvage recovery expected from the old assets which are to be retired. The difference between these two figures represents the net cash outlay which must be planned for the new installation.

Step 2.—Obtain the best available engineering estimate of the number of years during which the benefits claimed for the new expenditure are expected to continue.

Step 3.—Obtain the best estimate available of the expected revenue increase or cost-saving per year which may be expected to arise from the improvement in method which the new installation will effect.

Step 4.—Divide the estimated cost computed in step 1 by the number of years estimated in step 2 in order to ascertain the annual contribution to business revenues which must be received in order to pay the net cost of the proposed expenditure by the end of its service life.

Step 5.—Estimated net profit per year from the proposed expenditure will be computed by deducting the annual contribution required — per the calculation in step 4 — from the anticipated annual cost-saving or earning as estimated in step 3.

Step 6.—Compare the value of the proposed improvement as an investment of funds with the rate of interest return which might be obtained from alternative investment of the same funds by expressing the estimated net profit for the year as a percentage of the cash investment required.

Such a calculation will emphasize in a practical way the point that the more frequently machines are replaced, the more rapidly they must pay for themselves or, stated in other words, that the percentage of net profit earned to investment in equipment tends to decline as the intervals between replacements are shortened.

(b) Custody or Control of Long-Term Assets

Since most of the assets of this type are not of a size or kind to become easily mislaid and since they usually will be in more or less continuous operational use, the problem of physical control in this sense is not a serious one except in unusual cases. The problems of repairs and other maintenance are likewise not problems in which the specialized skills of the accountant are often brought into play.

A separate problem which does deserve serious consideration is protection of business finances against the most extreme consequences of risk of destruc-

tion of its productive equipment and business premises by fire, explosion, wind-storm, or other hazards of like nature.

The usual method of protection is the purchase of insurance policies. One problem is "How much insurance should the business carry on a particular property?" The books of the business may not be too helpful in this connection as they record how much the assets cost in the past, whereas the risk of loss which should be covered by the insurance policies is the present-day replacement values. If your policies contain co-insurance clauses and you fail to keep your coverage up to the required percentage of present day replacement values, you may be deemed a self-insurer for the amount of the deficiency and be unable to recover a part of your loss in the event of a fire.

The way to guard against this possibility is to have periodical appraisals made for fire insurance purposes and to adjust the coverage to the amounts which the appraisals show to be necessary.

In addition to insurance against the dollar value of the actual value of the assets destroyed or damaged, it is possible to buy protection against the incidental losses of business revenues occasioned by a shut-down of the plant when this is caused by a fire or other similar disaster. There would seem to be at least a presumption of gross negligence on the part of any management which failed to make at least a serious investigation of the desirability of placing this form of coverage.

(c) Utilization of Long-Term Assets

Long-term assets are used to earn the revenues of the business. One of the really difficult problems here is to determine how much of the total cost which is known becomes an annual cost when the term of useful life is unknown and cannot be determined by any technique other than prophecy. In some cases, there is a market price for used equipment which may give a rough indication of rates of obsolescence, as for example the market for used cars and trucks. In most cases, there are no such external indications and the anticipated useful life depends upon engineering estimates of physical endurance of the equipment as qualified by forecasts of the possibilities of future obsolescence arising out of the possibility of technological improvements which may be introduced into the industry or into competitive industries.

The allocation of cost of long-term assets on an annual basis is at best a rough and ready estimation, but it must be attempted on some basis even if an arbitrary one, if the profits of business are not to be overstated by the costs of these long-term assets which are used up, wear out, or become obsolete in the revenue-earning process.

(d) Disposal or Sale of Long-Term Assets

We have been dealing with businesses as going concerns, and by definition, the long-term assets are those which are held for a period of years in order to assist in the earning of business revenues. They are replaced or disposed of only when their usefulness is at an end. I have dealt with the pertinent considerations in a general way under the heading "acquisition of long-term assets", and no further comments will be offered under this heading.

Conclusion

To sum up, here are the major points stated in a general way:

(*1*) Directors and managers of business are given full control over business assets and business operations.

(*2*) They have a legal duty to manage the assets of business as a trust for the

owners of business. They also have additional duties to creditors of business and to governments.

(3) Their duties in regard to the business assets may be summarized in a general way as

(a) a duty to acquire the most efficient assets possible for a minimum expenditure;

(b) a duty to establish adequate custody and control and to see that assets acquired by the business actually are used for business purposes;

(c) a duty to see that the most effective use is made of the assets in the interests of maximization of business profits;

(d) a duty to regulate the sale or disposal of business assets so that the business will receive a maximum return therefrom.

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF SCOTLAND

New But Oldest

UNTIL the amalgamation this year of the three Scottish Chartered Accountancy bodies, Scottish chartered accountants were members of one of three bodies — The Society of Accountants in Edinburgh (incorporated by Royal Charter in 1854), The Institute of Accountants and Actuaries in Glasgow (incorporated by Royal Charter in 1855), The Society of Accountants in Aberdeen (incorporated by Royal Charter in 1867). Now they are all members of The Institute of Chartered Accountants of Scotland.

The amalgamation was effected by the granting to the Edinburgh Society of a supplementary Royal Charter which changes the name of that Society to that of the new Institute and provides for the amalgamation with it of the former Glasgow and Aberdeen bodies. Although, therefore, the name of the Institute is a new one, members, who number some 5,000 and are to be found in almost every country, can take pride in the fact that they are members of the oldest body of chartered accountants in the world.

The Institute is managed by a Council which will meet alternately in Edinburgh and Glasgow. There will also be local committees in these cities and in Aberdeen and Dundee and close co-operation is also to be maintained with Scottish chartered accountants in London.

The principal objects of the amalgamation are generally to enhance still further the standing of Scottish chartered accountants (whether in professional practice or otherwise) and to strengthen the co-ordinated arrangements for the education, training by apprenticeship and examination of those seeking to qualify for admission as chartered accountants. The members of the new Council are as follows:—

Mr. R. G. Simpson, M.C., (Edinburgh)
Sir Ian Bolton, Bt., O.B.E., D.L., J.P., (Glasgow)
Mr. John F. Carson, O.B.E. (Mil.), V.D., (Glasgow)
Mr. Charles D. Gairdner, (Glasgow)
Sir David Allan Hay, K.B.E., (Glasgow)
Mr. Gordon J. Innes, (Aberdeen)
Mr. Ian W. MacDonald, M.A., (Glasgow)
Mr. R. Ian Marshall, B.Com., (Edinburgh)
Mr. Andrew W. Mudie, (Dundee)
Mr. Charles R. Munro, (Edinburgh)
Mr. E. Birnie Reid, O.B.E., (Aberdeen)
Mr. John L. Somerville, F.R.S.E., (Edinburgh)
Mr. William Watson, (Edinburgh)

Letters from Readers

Toronto, July 13, 1951

BLANKET FIDELITY BONDS

Sir: As a subscriber to *The Canadian Chartered Accountant,* we were very much interested in reading Part I of the article entitled "Control of Assets", by Professor W. G. Leonard, F.C.A., of Queen's University, which appeared in the July 1951 issue of your publication.

In this article, on p. 15, Professor Leonard refers to fidelity bonds and makes certain observations as to conditions which might preclude the employer from collecting dishonesty losses from surety companies.

A careful reading of Professor Leonard's remarks leads us to believe that possibly he has used as a guide certain forms of fidelity bonds which are no longer in general use by many leading surety companies. The second to last paragraph on p. 15 reads, in part, as follows: "Unless the control procedures are sufficiently good to establish not only what has happened but who is responsible, the contract with the bonding company furnishes no protection to the assets of the business." We respectfully take exception to this statement. Under the modern forms of blanket fidelity bonds in use to-day, both in Canada and the United States, all that the employer is asked to do is furnish the surety company with reasonable evidence in support of a loss alleged to have been caused by the dishonesty of any one or more of the employees bonded. Under such a bond, the employer is not required to specifically name any employee as being the guilty party.

It is our belief that the lecturer has indicated the desirable business procedure from the auditor's point of view but the actual words used might be misunderstood by others to infer too strict an attitude by surety companies. In that respect we believe the present day views of the insurance industry are considerably changed from the conditions existing previously as are the wordings of all present day bonds in general use including the excellent and broad types of blanket bonds.

JOHN B. ALEXANDER
General Manager,
The Canadian Surety Co.

Queen's University, July 20, 1951

PROFESSOR LEONARD REPLIES

Sir: I read with interest Mr. Alexander's letter dealing with my advocacy of well-defined control procedures in order to obtain the expected benefit from fidelity bond coverage.

Clause 5 in the "Blanket Position Bond" is headed "Loss Caused by Unidentifiable Employees" and reads "If a loss is alleged to have been caused by the fraud or dishonesty of any one or more of the employees, and the insured shall be unable to designate the specific employee or employees causing such loss, the insured shall nevertheless have the benefit of this bond, provided that the evidence submitted reasonably (in case of inventory shortage, conclusively) establishes that the loss was in fact due to the fraud or dishonesty of one or more of the said employees . . . "

My article says that it is necessary to establish "who is responsible" and I am quite prepared to amend the wording to read "that it is an employee (or employees) of the business who is responsible". I trust that this clarification will be satisfactory.

I am greatly pleased to have this evidence that my article evoked reader interest and wish to assure Mr. Alexander that the ambiguity of wording was unintentional.

W. G. LEONARD, F.C.A.

Research Bulletin No. 6

THE AUDITOR'S REPORT

Bulletin No. 6 of the Committee on Accounting and Auditing Research of the Canadian Institute of Chartered Accountants, issued September 1951

WHILE the chartered accountant in professional practice may be called upon to perform a variety of services, he is most frequently engaged to act as auditor of a company, partnership, sole proprietorship, or association. The primary purpose of such an appointment is to obtain from the auditor an expression of his independent opinion as to whether or not the financial statements of the organization exhibit a true and correct view of the state of its affairs.

The Committee has reviewed many auditors' reports appearing in the published financial statements of limited companies and has found that there is no generally accepted wording for these reports. In cases where the auditor must qualify his opinion or make a disclaimer as to the extent of his examination, differences in wording are to be expected, but where no such qualification or disclaimer is required differences in wording may confuse the reader. To avoid such unnecessary confusion, it appears desirable that a standard form of wording of the report should be used, to be modified as special circumstances require.

Later in this bulletin the Committee recommends a form of auditor's report which it believes conforms to the requirements of *The Companies Act, 1934* (*Canada*). Before setting this out, however, it would seem desirable to consider the meaning of the term "audit", the nature of the report required under *The Companies Act, 1934,* and the extent of the examination necessary before an opinion can be expressed.

Audit Defined

In general, the term "audit" may be defined as "an examination of an accounting document and of supporting evidence for the purpose of reaching an informed opinion concerning its propriety".[1] As normally used in connection with financial statements the term "audit" may be defined as:

> *An examination sufficiently comprehensive to justify the expression of opinion that financial statements of an enterprise do or do not present fairly its position at a given date and/or the results of its operations for a period ended on that date.*

Report under The Companies Act, 1934 (Canada)[2]

The Companies Act, 1934, requires the

[1] American Institute of Accountants, Accounting Research Bulletin No. 9.

[2] In referring to the report required under the Act it has been assumed that the requirements to be met by the auditor have not been extended by special provisions in the by-laws of the company nor by the terms of the audit engagement.

auditor to report on the accounts examined by him and the annual balance sheet submitted to the shareholders and to state whether or not the balance sheet "is properly drawn up so as to exhibit a true and correct view of the state of the company's affairs". There are similar provisions in the various provincial Companies Acts and while none of these Acts specifically mentions a report by the auditor upon the annual surplus and profit and loss statements, there is a growing acceptance of the belief that the auditor should include in his report a reference to the profit and loss and surplus statements as well as to the balance sheet, and in many instances this reference is being included. It is the opinion of the Committee that the auditor should express in his report his opinion of the statements of profit and loss and surplus as well as of the balance sheet.

Scope of Examination

The definition of an audit set out above emphasizes the basic requirement that an opinion of an independent accountant upon financial statements is given only after an examination of such a nature and scope as will justify the expression of an opinion.

The extent of the examination which should be made in order to justify the expression of an opinion will vary according to the circumstances and must be determined by the auditor having regard to the circumstances of each particular case. The nature of the business, the extent of the system of internal control, and the reliability of the accounting methods, are all factors which have a bearing on the scope and nature of the examination the auditor must make.

Extent of Examination Must be Determined by Auditor

In order to express an opinion upon the financial statements it is seldom necessary or desirable to make a detailed examination of every transaction. The auditor will review the system of internal control. Based upon this review the auditor may limit his examination of detailed transactions to such tests as are necessary to establish that the system of internal control is being carried out as designed and to establish the reliability of the accounting records. It follows that the auditor will be required to extend the scope of his examination of transactions where there is no internal control or where the internal control cannot be relied upon.

Many phases of the examination are performed as of the balance sheet date, the actual work of the examination being performed either before or after that date. Some parts of the auditor's work may be carried out as of dates other than the balance sheet date. For instance, where there is an effective system of internal control, it may be useful and convenient in certain cases to perform the work on accounts receivable balances and inventories as of a date other than the year end.

The Auditor's Report

When the auditor has made an examination which included all procedures which he considered necessary in the circumstances and is of the opinion that the financial statements "exhibit a true and correct view" of the financial position of the enterprise at a given date and the results of its operations for the period ended on that date his opinion will be unqualified.

When the auditor is reporting upon the financial statements of a limited company incorporated under *The Companies Act, 1934, (Canada)*, and is in a position to express an unqualified opinion, it is recommended that his report take the following form:

AUDITOR'S REPORT[a]

To the Shareholders of

..Company Limited.

*I have examined the balance sheet of the ....
Company Limited as at .... 19....... and the statements of profit and loss and surplus for the year ended on that date and have obtained all the information and explanations I have required. My examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as I considered necessary in the circumstances.*

In my opinion the accompanying balance sheet and statements of profit and loss and surplus are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the company as at ....19...... and the results of its operations for the year ended on that date, according to the best of my information and the explanations given to me and as shown by the books of the company.

(Sgd.) ....

Chartered Accountant

With slight modifications in some cases this form may be used in reporting upon the financial statements of companies incorporated under provincial statutes, of partnerships, of sole proprietorships, and of associations.

Limitations in Examination

The above form of report will not be suitable where the auditor has not made as extensive an examination as he considers necessary to be able to express an opinion on the financial statements as a whole. In such instances he may state that the statements are in accordance with the books but he should state that, because of the omission of certain procedures, he has not been able to form an opinion as to whether or not the financial statements as a whole exhibit a true and correct view.

The omission of some normal procedures may not, in some cases, prevent the auditor from expressing an opinion and if it does not the above form of report, with suitable qualifications as to the procedures omitted, may be used.

There may be cases where the auditor wishes to report some limitation in his examination even though he does not consider that the procedures omitted were necessary to enable him to express his opinion, for example, he may wish to state in his report that he did not make a detailed audit of all transactions. While the Committee does not believe such additional comment is necessary there can be no objection to its inclusion, provided the comment is so worded that it is clear that the omission of the indicated procedure does not qualify the general statement as to the adequacy of the examination.

[a] It may be thought desirable to state also the statute under which the audit has been conducted.

Recent Books

Basic Audit Case, by Harvey G. Meyer, M.A., C.P.A.; published by Prentice-Hall, Inc. (New York) 1951; pp. 225; price $3.75 U.S.

This "Audit Case" has been prepared for the use of university students, and is short enough for completion in one term. Emphasis is placed on the audit program, rather than the details of audit procedure. The case provides that the student will prepare working papers and the audit report. The previous year's working papers and report are included in the text, and should prove interesting and valuable to students who are not familiar with a complete set of working papers. The book also includes a number of short problems.

Aside from the use to which the book can be put by universities, as indicated above, this basic audit program for balance sheet items should prove of use both to students and practising accountants. Whilst it is not a substitute for present balance sheet manuals that are in use in the larger firms, it would provide a good starting point for a firm embarking upon the use of a new one, and a good list with which to check on audit procedures where the program is in a process of development. For students working in the smaller offices, where it is not customary to prepare formal programs, familiarization with one through such a medium as this would most certainly be valuable.

The working papers, themselves, while perhaps a little more detailed than would be found in practice, would form very good reference material and guide to the student.

Generally, the book appears to be very well prepared and thought out, and the procedures and comments sound.

GEOFFREY H. WARD, C.A.
Toronto, Ontario

Principles of Accounting, Intermediate (4th ed.), by H. A. Finney and Herbert E. Miller; published by Prentice-Hall, Inc. (New York) 1951; pp. 953 and index; price $7.65 U.S.

For a book of 975 pages (3rd ed. 1946, 873 pages) the subjects covered are not numerous. There is a short review of bookkeeping, three chapters on end-of-period procedures, a chapter on corrections of profits of prior periods, and several on accounting statements and their analysis. There are three chapters on corporations, twelve chapters on the various balance sheet items, a chapter on the determination of net income and the final chapter on the statement of application of funds. A reduction of two chapters from the earlier edition is the result of eliminating two chapters on partnership, one on interest and annuities, and the addition of the opening chapter on bookkeeping.

The emphasis throughout is on corporation accounting and Canadian students will have to add their own statutory requirements and will not be familiar with the many references to American Institute Bulletins. Naturally enough the authors make no use of the Canadian Institute Bulletins and do not draw comparisons with the requirements of the Canadian *Companies Act*. The international usefulness of texts is likely to decrease be-

cause of the growing importance of governmental regulations and statutes and the pronouncements of professional bodies. These are national in character and the references in this text as in most other recent ones are numerous and limited to those of the authors' own country.

The chief criticism of the book is for a feature which teachers and students alike are apt to praise as its greatest asset. It is that the authors make no assumption of ability in the reader and painstakingly take him by the hand through example after example, not merely indicating points of differences in methods but working them through in detail using full size illustrations. On pp. 40-41 a two page 10-column working paper duplicates the information on pp. 38-39 except for two columns which illustrate the capital accounts of two partners as compared with one column for the capital account of one proprietor. An alternative method of preparing the working papers of a manufacturing business shown on pp. 46-47 is to prepare working papers for each statement separately carrying forward the totals from the preceding statement. The explanation of this simple alternative is given in a following chapter and covers six pages. The basis of illustration for 20 pages on comparative statements in chapter 7 is the statements of one company which cover three and a half pages and show the balance sheets for four years and the operating statements for three years. Page 205 is devoted to working operating ratios which differ from those on the preceding page only because they are less than unity. From the foregoing it is apparent where the book gets its length (aside from 300 pages of assignment material) and one realizes the prodigious efforts of the authors to make the coverage complete and realistic. The disadvantage of such an approach to writing is the cost and the weight of the volume produced.

The book is the middle one of a series of three and the authors had to decide what overlapping was necessary between the introductory and advanced so that each text could be used independently of the others. Chapter 1 and much of chapters 2 and 3 repeat work covered in the introductory book and the chapters on the corporation and the statement items are extensions of work covered earlier. The advanced book also includes a certain amount of duplication; however, it is inevitable in order to achieve the independence required in each book as well as to introduce more advanced discussions of certain subjects. The changes in content made in this edition of the intermediate require a new edition of the advanced which is already planned.

On p. 4 the authors seem to be wavering about including the time-honoured textbook distinction between real, nominal, and mixed accounts but unfortunately decide to continue it. Another unnecessary term "Auxiliary accounts" is referred to on the same page as an account "closely related to another (major or principal) account".

On p. 134, after quoting extensively from the American Institute Bulletins dealing with statement classifications, the authors agree with the recommendations and surprisingly state that the old concepts used in the chapters up to that point are outmoded and will be replaced by the new from then on. This is apt to shock a few students but is most refreshing. It comes a little late in the book for Canadian students who find "Deferred charges" among the "Balance Sheet" classifications on p. 29 and no mention of "Prepaid Expenses" with which they have long been familiar and which is not considered synonymous therewith.

Although the book teems with examples, there are also very good parts

devoted to accounting theory. Alternative opinions are given and where conflicts are still unsettled the authors often do not take sides. Chapter 6 on accounting statements is extremely meaty and interesting. One problem which faces Canadian authors is settled on p. 237 as follows: "The term 'capital surplus' will not be used in this text".

The book is beautifully written and printed. It is obvious that the well polished third edition was examined line by line and every possible refinement added. The revision has made a good book better and wherever the authors appear to be leaning over backwards to help the weaker students, the good students can play leapfrog with no ill effects.

F. H. BUCK, B.Com., C.A.
Toronto, Ontario

Note: A Canadian supplement to the third edition of this book has just been published and will be reviewed in a later issue.

The Successful Practice of Accountancy, by Paul E. Bacas; published by Prentice Hall Inc. (New York); pp. 441 and index; price $5.35

This, a first edition, has a new approach aptly described by the publisher as "totally different from any book on accounting you have ever seen because it takes you as far as you want to go in your profession".

The title may be a bit misleading as to content, as the book could almost serve as a text book or a manual for the young accountant who may be contemplating establishing himself in practice either alone or in partnership with others. It covers a wide variety of factors to be considered in arriving at a decision and also many of the problems with which the practising accountant is confronted and offers constructive suggestions as to how they may best be approached.

It is a very readable work in which the author covers such features as the appropriate choice of location — whether in a large or a smaller community — important considerations in selecting and training an audit staff, the obtaining and retaining of clients, the fixing of fees and, in general, the conduct of audits or investigations and preparation of reports. He also makes suitable reference to such matters as professional ethics, public relations, specialization in taxation and other branches of accounting as well as other interesting features. To illustrate his various points he cites many beneficial, as well as unwise, practices drawn from his own personal experiences or those of his acquaintances.

While it would seem to be his intention that this work be used mainly by the younger accountant as a helpful guide, many parts of it will be of interest to the more experienced as well.

Like many other books on accounting it is a bit lengthy and there is a tendency towards repetition and possibly an excess of obvious illustrations.

On the other hand it covers such a variety of intimate experiences which arise continually in our day-to-day practice that it should be found most useful for reference purposes and be a valuable addition to any accountant's library.

In reading this book the Canadian accountant should appreciate that it refers essentially to accounting in the United States and that, in certain aspects, practices and procedures in that country may differ, in slight degree, from those adopted in Canada.

J. A. DELALANNE
Montreal, Quebec

Collection Practices And Customer Attitudes

By W. L. Child, C.A.

How to educate the customer to pay promptly is the collection manager's problem

TODAY we are said to live in a credit economy, or credit world, in a business system pervaded by the power called credit. As pointed out by Professor C. W. Phelps in his book "Retail Credit Fundamentals", we are used to hearing modern life spoken of as a machine civilization, the power age, industrial society, capitalistic and socialistic cultures, and so on. Each of these phrases is an attempt to differentiate our present society from the preceding civilization or epochs by naming it after some outstanding characteristic. With the growth of this credit economy a new branch of management has come into existence in commercial organizations: namely, credit management, and again, as the system developed in complexity the work of credit management has become more skilled and specialized.

In broad terms the functions of credit management today can be said to be threefold: first, the securing of new business; second, the control of credit; and third, the collection of debts after the termination of the credit period. Here I shall deal only with this latter function, the collection of debts, and in particular as related to utility companies. I shall outline the fundamental policies and practices in use applicable to service accounts from the time the bill is rendered to ultimate payment or the cutting off of the service, and indicate the customer attitude towards various types of collection notices commonly used in the industry.

New Ideas

In the early part of last year the joint AGA-EEI Collection Committee undertook a similar task and Mr. L. R. Quad of the Public Service Electric and Gas Company, in an address before the National Conference of Electric and Gas Utility Accountants, reported on the work of that committee as follows:

> In the continued work of the Collection Committee many new angles and ideas have been developed in past years and we are sure that the work of the committee will continue to include practices, procedure and policies which will be of interest to the industry. The committee thought it would be of interest to review within the industry some basic collection practices.
>
> Fifteen representative companies covering the operation of collection departments from coast to coast were asked to submit their practices. All of these companies

An address to the Accounting Section of the Canadian Electrical Association, Montreal, May 1951

responded and the basic operations of their collection departments have been reviewed by the committee with a great deal of interest. It was found that fundamental practices do not differ greatly. The primary difference which existed in the operations seemed to lie in the amount of collection treatment given. This, of course, is largely dependent upon the collection policy of the individual company.

After considerable discussion and concentrated effort on the part of your committee to reduce the collection practice of fifteen companies to one basic practice, the attempt was abandoned. The "boiling down" process resulted only in a conglomerate picture which was in effect more confusing than enlightening. It was proposed therefore that the practice of one representative company be selected in order that you may obtain as much information as possible of a helpful nature.

For precisely the same reason I shall be forced to lean heavily upon the policy and practice followed by the company which I represent. These we consider are suitable to our own type of local conditions but I would not dare to submit that they would be as applicable to all types of territories served.

Educate the Customer

The prime objective of successful collection should be to educate the consumer to pay promptly, because if this is done it not only gets the money from the consumer, but also achieves three great benefits. These benefits are to the company, the consumer, and the credit management. The advantage to the company is that in educating consumers to pay promptly it reduces the cost of doing business by eliminating the expenses and losses arising from slow payment. The consumer benefits from being educated to pay promptly because this habit keeps him in a sound financial condition, prevents worry, makes him a better worker and a happier individual. The credit management benefits in that it gives the management the opportunity to make the finest possible contribution to the lives of these people. It is this opportunity to play a definite part in the building and strengthening the character and moral fabric of the public at large that raises the role of credit management from that of a common job.

The National Cash Register Company gives the following reasons for educating customers or consumers to pay promptly:

1. Customers usually are better able to pay when the account is new.
2. Customers who understand that a company expects its money at the time agreed upon have more respect for the company, especially when they know the company plays no favourites.
3. Collection is more difficult and the expense increases with the age of the account.
4. The company is entitled to the money paid on the service rendered and its profit.
5. Remember — "Money tied up earns no interest".

These points were not listed necessarily with a utility company in mind, but, nevertheless, I think they are appropriate.

Selling the Idea

"Collection is fundamentally a matter of salesmanship: selling the consumer on the idea of paying promptly."[1] It is not salesmanship in the sense of letting some pay as they please, name their own terms, or be granted concessions. There are, however, exceptions to all rules and cases do arise where consideration should be given. These cases must be judged on their own merits. The granting of special terms

[1] "Retail Credit Fundamentals", by C. W. Phelps, Professor of Economics, Univ. of Southern California.

and allowances to irate consumers by way of appeasement, in my opinion, is a very dangerous practice and tempting as it may appear must be strictly guarded against at all times. Such a policy, of course, is discriminatory, may have a damaging effect on the goodwill relations between company and consumer, and is contrary to the prime objective of successful collection: namely, the educating of the consumer to pay promptly.

The first step toward achieving this prime objective is to have a definite collection policy. In the case of a utility company it is clear cut, since the policy is laid down normally by its governing regulatory board. In the case of the company which I represent, electric accounts are rendered bi-monthly and payable "net" 10 days thereafter. The "gross" bill is payable 30 days after being rendered or 20 days after the discount or net period has expired. An exception to the bi-monthly billing procedure is certain large consumers, such as, government installations, industrial accounts, theatres, etc. These accounts are billed monthly, but the same terms are applicable. The cycle billing procedure is followed for the general consumer accounts while the excepted large consumers are billed on the first of each month. I think the terms of payment are fairly well general throughout the industry, although a large percentage of companies do bill on a monthly rather than bi-monthly basis.

Personalized Contacts

Now at this stage we might explore what procedures are followed in order to carry out and aid the objective of endeavouring to educate the consumer to pay promptly. In our company we attempt to personalize our contact with the consumer through the use of the

Mr. W. L. Child, C.A. was admitted to the Quebec Institute in 1940. He served overseas in the Army for five years and in 1946 joined the staff of George A. Touche & Co. in Montreal. In 1950 he was admitted to the Nova Scotia Institute. At present he is treasurer of the Nova Scotia Light and Power Co., Halifax.

"Reddy Kilowatt" personality. He is our real contact man — he does all the talking for the company over the radio, through the medium of the newspapers, window and store displays, on our bills, disconnection notices, and recently we put him on our cheques; not that we are anxious to sell our creditors too, but we are conscious that a goodly proportion of our creditors are also our consumers, and therefore the medium affords just another outlet of reaching the public at large, and a cheap one at that.

"Reddy Kilowatt" is characterized as the smiling mighty atom who goes into every home and does the washing, cooking, cleaning, provides the lighting, the radio, the refrigerator, etc., all with the theme that you are his boss, he is your servant, and again of course, his services are the cheapest and most efficient on the user's list. It is a feature that has been granted a design patent by the United States government and also protected in Canada. It cannot be used by other industries, such as telephone, water, etc. It is unique in that it converts the technical and little understood electric bill into a bill for servant's wages after he has worked long hours at a low rate of pay and every consumer knows that a servant must be paid his wages regularly and on time. Here is what "Reddy Kilowatt" has to say at present on our bills.

Of all the bills you are asked to pay
There's none more fair than this,
It covers good service night and day
At a cost you will scarcely miss.

REDDY KILLOWATT
Your Electric Servant

The verses are changed from time to time with each new printing of bills and the messages through their various mediums do have effect.

Discounts

A further step in the inducement of prompt payment is the discount feature granted with payment within the 10-day period after the bill has been rendered. Actually, I was much surprised to have my eyes opened a year and a half ago when I became associated with the industry to find that it is not a discount earned at all but actually the savings of a penalty. In our case, and again I presume it to be general utility practice, the net bill is actually the consumption computed at established rates and the gross amount is determined by adding 10% to the net charge. The reason for the misnomer term "discount" instead of "penalty" I presume is part of a good consumer relations policy; the thought of being able to take advantage of a discount rather than the incurrence of a penalty, no doubt, has more appeal. However, the inducement for prompt payment by this so-called discount feature is undoubtedly one of the strongest offered, for it hits directly at the pocket book and every effort should be made to exploit it. The consumer should be encouraged in every respect to take advantage of the savings but the approach must be subtle in character. The consumer may well be kept in ignorance of the actual due date of the bill by thus making no reference to the gross payment date on the bill, and still further, by reference to only the expiry discount date may be led to believe that it is the real due date. Not all companies have the discount or penalty feature in their rate structures and it is assumed, with some reason, that companies without such provision to give incentive for prompt payment would experience a more difficult collection situation.

Budget Payments

Another inducement for prompt payment used by some companies is the offering of a budget plan payment method. This plan actually started as a convenience extended to some consumers who through force of circumstances were forced to operate on limited incomes. It dates back as far as 1936 when a few of these consumers who were having a hard time keeping their accounts paid were allowed to pay on an average monthly basis. It worked well and proved to be such a convenience that out of it the plan grew with little advertising or selling. One of the principal incentives to the consumer offered by this plan is that he will not lose any discounts providing the monthly or bi-monthly payments are made. Experience has proved that through the plan many who had previously been delinquent year after year, under the plan became reversed to enjoy instead credit balances in their accounts.

The principle of the plan is that an average monthly or bi-monthly account is arrived at by averaging the accounts for a period of one or two years. The average figure determined is then brought up to even dollars and this is the regular fixed monthly or bi-monthly charge that the consumer is asked to pay each period. The budget year begins in the spring, so that the consumer builds up a credit in order to take care of his winter's heating requirements. Special cases are re-

viewed during the year and the periodical payment adjusted up or down as necessary but a complete review of the budget payments is made every spring.

The plan has several good features apart from the point of stimulating collections. The accounting cost of operation is not too burdensome, and to a large extent is offset by the interest earned to the company on the credit balances. In addition, producer and consumer relations are maintained on a high level. The plan is popular. This is proved by a recent report of The Canadian Western Natural Gas Company which has the plan in force and states that out of 2,500 consumers presently taking advantage of the plan they can be assured of an increase of from 200 to 300 consumers per year.

Bank Payment Plan

A further persuasion to prompt payment is the bank payment plan. Here, by signing a standard form, the consumer instructs the company to send his bills to his banker for settlement and authorizes the amount to be charged against his personal account. This method hits at the consumer who is delinquent through sheer neglect of his obligation to pay rather than for financial reasons. The plan is a good one and does much to improve consumer relationships without adding any particular burden to the work of the company. I find it difficult to understand why it is not sponsored more publicly by companies.

Amongst other forms of collection might be mentioned what could be termed the "Travelling Cashier" service employed by the Public Service Electric and Gas Company of New Jersey. This service consists simply of a large staff of field collectors engaged in collection follow-up work. The service is undeniably convenient to many consumers but also has been found to be very expensive to the company. Again there are the "drive in" pay stations such as provided by the East Ohio Gas Company and the "roving cashier service" provided by the Consolidated Edison Company of New York. This latter service is in the form of a bus converted into a rolling cashier's cage, which travels on an announced schedule from one neighborhood to another. Both these services undoubtedly have merit when applied to the special characteristics of the areas serviced.

Rural collections can be greatly improved by the wide use of collection agencies, such as banks, post offices, and general country stores. These agencies can be extended almost unlimitedly serving as greater convenience to the customer with little additional cost, if any, to the company when collections are paid on a flat rate commission basis per account.

Reminder Notices

As I previously mentioned, in the company which I represent bills become due and payable at the gross amount 30 days after the date rendered, or 20 days after the expiry of the discount date. As this due date approaches, it is the practice of some companies to send out reminder notices. The notice may be in the form of a simple card enclosed in an envelope, and more elaborately it may be an envelope arrangement design having the inside of the envelope flap containing the reminder message and with a perforation line on the flap which can be torn off leaving a self-addressed envelope to the company for the customer's convenience in making his remittance.

This type of friendly reminder plea, in my opinion, serves more to protect

the company from the claims of the irate type of consumer who, when he receives the ultimate cut-out notice threat, insists that the company neglected to render him a bill in the first instance, rather than to serve as a forceful medium of collection. It is doubtful whether the costs involved in sending out the reminders warrant the monetary return. However, I would not venture to be conclusive on the point, the type of consumers served would have to be given careful consideration.

A Friendly Warning

Again, in our company, we are empowered to discontinue a consumer's service after the bill has been outstanding and unpaid for a period of 40 days after date rendered or 10 days after it becomes due and payable. Our practice is to omit the friendly reminder notice step, but when the account reaches the disconnection date we send the consumer a cut-out notice, threatening disconnection of service, and extending the period of payment for a further five days in order to allow the consumer to make settlement. Here, again, we use the services of "Reddy Kilowatt" in our request for payment. The notice reads as follows:

> Dear Boss:
>
> I haven't received my pay. I've been working long hours at low wages, full-time, day and night, as your servant, but for some reason you've overlooked sending my wages. The amount that you owe is written over at the right-hand side.
>
> I cannot continue to work without my pay and, unless you make satisfactory settlement by the time shown, I will have to consider myself "fired". That means they will "disconnect" me and that will be disagreeable to both of us, but I know you don't want that to happen . . . and I don't either . . . so won't you please pay promptly.
>
> Your electric servant,
> REDDY KILOWATT

By the use of the "Reddy Kilowatt" personality the company is able to talk to the consumer in an off-hand manner and say things which normally could not be said by the company. Some consumers, I must confess, consider this notice from "Reddy" as a sort of joke, but on the other hand others have thanked us for the genial manner in which we have brought the account to attention.

Calling in the Collector

In order to allow time for payments to come in from our collection agents the cut-out notices are not checked for payment until three days after the expiration of the dead-line date. At that time the unpaid accounts are handed to collectors for further action. These men then visit the premises of the delinquent consumer but before disconnecting the service endeavour to obtain payment, or at least as a last resort, an agreement to pay which is acceptable to the company. However, once disconnected, the service cannot be restored until the account is paid in full. In actual practice, it is not customary to disconnect service where there is sickness, death, or some such serious household disturbance. In cases where a consumer is disconnected for non-payment more than once in twelve months, a charge of one dollar is made for the second and each subsequent reconnection. In some companies it is not the policy to discontinue service on a Friday or a day preceding a holiday unless exceptional conditions in the judgment of the management warrants such action. This is done in an effort to avoid unnecessary delay in the restoring of a consumer's service should the payment be received.

Continuous Review

I do not consider our system of collection to be perfect. As a matter of

fact perfection in any system never remains static. Collection systems, like most other systems, continually must be undergoing review and revision in order to meet the requirements of changing times and conditions and becoming ever more popular as an agent is the use of the telephone. It is cheap and effective where facilities are available to reach the consumer. Once an account approaches the cut-out notice stage we are gradually instituting the procedure of making the friendly telephone reminder call. The results are proving favourable and do seem to have an appeal to the consumer who rather prefers to have an account drawn to his attention in this informal manner than by means of the more formal notice method. There is a certain applied psychology in the approach, many people object to seeing their name in print on an official form of any type associated with a past due debt—print tinges of permanency and record, whereas the verbal contact by virtue of its contrast is quite acceptable.

It is interesting to note the general reaction of consumers to bills. From a recent investigation of a group of 1,257 of our consumer accounts, it was found that 103 or 12% required cut-out reminder notices. Of this group 60 paid within the 5-day period allowed by the notice and the balance or 43 paid their accounts to our collectors. Fortunately, in this group we suffered no bad debt losses, but such is not always the case, I regret to say.

Consumer Deposits

Although it may not be considered directly as coming under the heading of collection practices, the subject of consumer security deposits is so closely allied that I think a few sentences in this connection may be fitting. Over the past year whenever the opportunity presented itself I have made enquiries of other companies with a view to finding out what may be considered standard practice in this regard in the industry. From what I have been able to glean, the practice of insisting on deposits from commercial and industrial accounts is standard, but the procedure with respect to new domestic accounts is very much at variance. I doubt whether any set standard can be established, for the problems involved are different with each company and directly related to the type of territory served. However, I do think for the sake of good consumer relationships it is as equally imperative that each company has a clearly defined policy in this respect as it is essential for each company to have a definite collection policy. The insistence of a deposit from one consumer while not demanding one from another without logical reason acceptable to both types of consumers is a dangerous course to pursue. The same is applicable to the reverse procedure of making deposit refunds to continuing consumers. Consumers do have contact with one another and the one who has been required to post a deposit is offended readily when he finds the same was not required of his neighbour, unless the company can advance good reason for the action. Similarly serious trouble can be caused in making refunds of deposits. In other words, I would suggest that a middle course between insisting on security deposits from all consumers and of not requiring any is a perilous one and should be approached with caution.

Two Essentials

In conclusion, I would repeat, the two common essentials to all successful collection practices are, firstly, the aim of the primary object of endeavouring to educate the consumer to pay prompt-

ly and, secondly, the necessity of a definite and clearly defined collection policy from which there must be no deviation. From here, in this industry, a practice cannot possibly be outlined to meet the requirements of all companies. Each company must work out its own formula to suit the needs of the type of consumers within the areas it serves. Seldom will two collection treatments be identical although they may be similar in many respects and always basic in principle. The more thought, planning, and careful consideration which are given to the formulation of the proper practice required to suit the individual needs, the more will be the reward, but not only to the company but also in service to the country at large and the people in particular, by making them happier and better citizens. This makes the role of a collection department one always worthy of our constant and earnest endeavours toward perfection.

Professional Notes

BRITISH COLUMBIA

Mr. Robert McDougall, C.A. has opened an office for the practice of his profession at Ste. 3, Van Houten Bldg., 16 Commercial St., Nanaimo.

MANITOBA

Riddell, Stead, Graham & Hutchison, Chartered Accountants, announce the admission to partnership in their Winnipeg office of Mr. Eric N. Wright, C.A.

NEW BRUNSWICK

Mr. J. K. Logan, C.A., announces the opening of an office for the practice of his profession at 668 Dunn Ave., West Saint John.

NOVA SCOTIA

Nova Scotia Students Association

The Maritime Convention of the Students Association of the Institute of Chartered Accountants of Nova Scotia was held on June 21 in Halifax. A number of lectures were given by various members of the profession and the convention was concluded by a banquet and dance at the Med-O Club. Alan Butler, Jr. was chairman.

ONTARIO

Armstrong, MacLaren & Co., Chartered Accountants, announce the opening of their new office building at 43 Collier St., Barrie.

* * *

Stern, Sanders & Co., Chartered Accountants, announce the removal of their offices to 667 Yonge St., Toronto.

* * *

Mr. Geoffrey H. Ward, C.A., announces the opening of an office for the practice of his profession at 28 Duke St., Toronto.

* * *

Thorne, Mulholland, Howson & McPherson, Chartered Accountants, announce the admission to partnership in their Toronto office of Messrs. E. P. Hudson, C.A., L. W. Trumble, C.A., G. R. Ferguson, C.A., T. M. Chase, C.A. Mr. J. L. Caskey, C.A. has been admitted to partnership in their Galt office and Messrs. W. D. Caskey, C.A., H. F. Cumming, C.A., and C. H. Spry, C.A. have been admitted to partnership in their Kitchener office.

* * *

Chartered Accountants Club of Ottawa
Students Branch

The Students Branch, Chartered Accountants Club of Ottawa, held their annual meeting on Friday, June 22, 1951. This meeting took the form of a combined golf tournament and supper meeting. The reports of the president and treasurer were distributed to the members. The following executive was

elected to hold office until May 31, 1952: *past president*, A. G. Holley; *president*, S. C. Bateman; *vice-president*, E. Ouellette; *secretary*, M. J. Stotesbury; *treasurer*, J. R. Giles; *committee members*, R. Rourke, S. P. Kirby, J. C. Grant, S. Aisenberg.

QUEBEC

Quebec City Committee

The Quebec City Committee of the Institute of Chartered Accountants of Quebec announces that the following officers were elected for the year 1951-52 at the sixteenth annual meeting of the committee held at the Manoir St-Castin, Lac Beauport, on June 2, 1951: *president*, Marius Laliberté, C.A.; *vice-president*, Maurice De Coster, C.A.; *secretary*, Roger H. Stanton, C.A. The following are directors: Dollard Huot, C.A. (past president), J. Paul Bolduc, C.A., Antoine Chabot, C.A., Jean-Paul Gagnon, C.A., Omer Pouliot, C.A. Jean La Tour, C.A. is auditor.

The meeting was followed by a dinner at which the guests of honour were Messrs. David Robillard, C.A., president of the Quebec Section of l'Association des Licenciés de l'Ecole des Hautes Etudes Commerciales, Henri Giroux, C.G.A., president of the Quebec Section of the General Accountants Association, Guy A. Paquet, L.S.C., president of l'Association des Licenciés en sciences commerciales de Laval, Omer Couture, C.G.A., R.I.A., president of the Quebec Branch of La Société des Comptables en Administration Industrielle.

* * *

Stevenson, Walker, Knowles & Co., Chartered Accountants, Bank of Nova Scotia Bldg., Montreal, announce the admission to partnership of Mr. J. Arthur Madill, C.A.

News of Our Members

Mr. G. M. Hall, C.A. (Ont.), has been appointed comptroller of Stromberg-Carlson Co. Ltd., Toronto.

* * *

Mr. A. V. Harris, C.A. (Que.), R.I.A., was elected president of the Society of Industrial and Cost Accountants of Canada for 1951-52 at the 30th annual Cost and Management Conference at Ste. Adele, Que.

* * *

Mr. J. A. de Lalanne, C.A. (Que.), C.B.E., M.C. (with Bar), has been appointed to the Montreal Advisory Board of the Chartered Trust Company.

* * *

The officers elected at the annual meeting of the Vancouver Chapter of the Institute of Internal Auditors include five chartered accountants; all of whom are members of the B.C. Institute. John A. Campbell, C.A. was elected vice-president and Norman M. Crute, C.A. treasurer. Hugh R. Horne, C.A., J. Stuart Lang, C.A., and William F. Martin, C.A. are governors of the chapter.

The Students' Department

J. E. Smyth, C.A., Editor

NOTES AND COMMENTS

"CAN income result from a barter transaction such as the exchange of eggs for sugar?" This question, at the end of a chapter on the theory of income measurement in Smails' *Accounting Principles and Practice* has recently excited our interest. We wonder how many marks Professor Smails would give us for the opinion stated below.

The main point we would make is that income — the difference between revenues and expenses — should be subjected to a "cash" test at some stage before it is recognized. We are not trying to say that income must have been realized *in cash* by the time it is recognized. In point of fact revenues may be partly measured by *receivables* as well as by cash, and the expenses may not all have been paid for. But behind each of the transactions, the effects of which are brought together for the measurement of income, there is a contract; and the contract names a price in dollars.

Our view is that when eggs are exchanged for sugar, the "value" of the sugar received must be taken as being equal to the *cost* of the eggs surrendered. The quantity of sugar obtained multiplied by the *current retail* price per pound may well exceed the barterer's figure for the cost of the eggs. Even so, we think he has not yet realized any revenue from the transaction.

This is, admittedly, a matter of definition. Our definition of revenue is the measure of the flow of cash or receivables into a business in return for goods sold or services rendered. By this definition revenue cannot be realized until the sugar is sold, either for cash or on credit. Not until then will the objective test of the market have been applied to determine the "worth" of the sugar received. The test of the market is really the only objective test of money value because it exposes goods to a conflict of interests and to the bargaining of independent persons dealing at arm's length. If a man says he has bartered eggs of a cost of $400 for sugar worth $500, let him sell the sugar and prove his point.

As a matter of fact, any other concept of income is not of much use. Will the Receiver General take sugar as a payment on account of income tax? And what will a man's wife say when he brings home a truckload of sugar and says he has her month's household allowance outside and will bring it in as soon as he can get some help?

* * *

There are some other rather less fundamental questions one might ask too, if he were in a really inquisitive mood. The quantity of sugar on hand times the current market price per pound may come to, say, $500 but does this price apply to the place where the sugar is presently

situated? Would it be available for quantities as great as those on hand? May not the price change while the sugar is yet held? There is many a slip 'twixt the cup and the lip.

What we are trying to say (we think) is that when one barters one thing for another he has no accounting proof that he has improved his position. He may of course have a strong opinion on the subject — most such people have. Doubtless he would not have made the exchange unless he *thought* he had improved his position. But the man who has obtained 10,000 pounds of sugar in exchange for 600 dozen eggs really *knows* nothing more than the cost of the sugar to him—which is the same as the cost of the eggs. If he says his 10,000 pounds of sugar are "worth" $500 (based on a current market quotation) he is, to our way of thinking, in much the same position as a businessman who, having bought a building for $4,000, now says it is "worth" $5,000. Most accountants would decline to recognize income in the latter case.

PUZZLE

A certain field of clover of constant growth will now graze 40 sheep for 20 days or 30 sheep for 30 days. For how many days will it graze 25 sheep?

(Contributed by D. J. Kelsey, C.A.)

SOLUTION TO LAST MONTH'S PUZZLE

No. George never saw the monkey's back, which he clearly would do if he had walked around the monkey.

PROBLEMS AND SOLUTIONS

Solutions presented in this section are prepared by qualified accountants and reflect of course the personal views and opinions of the various contributors. They are designed not as models for submission to the examiner but rather as such discussion and explanation of the problem as will make its study of benefit to the student. Discussion of solutions presented is cordially invited.

PROBLEM 1

Intermediate Examination, October 1950

Accounting II, Question 3 (15 marks)

The G. Co. Ltd. was incorporated on 4 Feb 1950 under *The Companies Act, 1934*. The terms of the charter authorized share capital as follows:

5,000 shares 5% preferred shares @ par value of $100 each and

30,000 no par value common shares.

From the date of incorporation to 31 May 1950 the following transactions re the allotment and issue of capital stock occurred:

4 Feb 1950 — 6 common shares allotted and issued to the directors of the company at $15 each and the cash received for same.

5 Feb 1950 — 2,500 preferred shares offered for sale at 101.

3 Apr 1950 — Applications received for 3,000 preferred shares together with a deposit of $10 per share on application.

6 Apr 1950 — 2,500 preferred shares allotted to subscribers with request for further payment of $25 per share. Cash received on applications accepted deposited.
7 Apr 1950 — refund made of deposits on applications not accepted.
10 Apr 1950 — all shares allotted were issued.
10 Apr 1950 — all cash due on allotted shares received and deposited except for that due on 100 shares.
16 Apr 1950 — 10,000 no par value common shares issued for land and building taken over at a value of $120,000.
21 Apr 1950 — 10,000 no par value common shares offered for sale at $15 each.
25 Apr 1950 — applications received for 15,000 no par value common shares.
27 Apr 1950 — 10,000 no par value common shares allotted.
30 Apr 1950 — cash received for common shares allotted and shares issued. 20% of cash received was credited to distributable surplus, as per resolution of the directors.
13 May 1950 — further call made of $45 per share on preferred shares.
28 May 1950 — 100 shares preferred forfeited for non-payment of call on issue.
31 May 1950 — received and deposited three-quarters of the cash due in respect of call of 13th May.
31 May 1950 — 100 forfeited shares sold for cash at $80 per share.

Required:

(a) Journal entries, complete with narratives, to record the foregoing transactions.
(b) Balance sheet as at 31 May 1950.

A SOLUTION

(a)

1950		Dr.	Cr.
February 4	Cash	$ 90	
	Capital stock issued — common no par value		90
	To record issue of 6 shares common stock at $15 per share fully paid to directors on incorporation		
April 3	Cash	30,000	
	Applicants — preferred		30,000
	To record application by public for 3,000 preferred shares at 101 together with deposit of $10 per share		
April 6	Applicants — preferred	25,000	
	Subscribers — preferred	62,500	
	Capital stock allotted — preferred		87,500
	To record allotment of 2,500 preferred shares to applicants at 101 per share and receipt of $10 per share deposit with application and call of further $25 per share		
April 7	Applicants — preferred	5,000	
	Cash		5,000
	To record refund of deposit to unsuccessful applicants		
April 10	Cash	60,000	
	Subscribers — preferred		60,000
	To record receipt of cash of $25 per share on allotment of 2,400 preferred shares at $25 per share		

April 10	Uncalled subscription — preferred stock	165,000	
	Capital stock allotted preferred	87,500	
	Capital stock issued — preferred		250,000
	Premium on preferred stock		2,500
	To record issue of 2,500 preferred shares at 101 and unpaid and uncalled subscriptions thereon		
April 16	Land and building	120,000	
	Capital stock — common — N.P.V.		120,000
	To record issue of 10,000 fully paid common shares in payment for land and buildings		
April 27	Subscribers — common	150,000	
	Capital stock allotted — common N.P.V.		150,000
	To record allotment of 10,000 common shares at $15 per share		
April 30	Cash	150,000	
	Subscribers — common		150,000
	To record receipt of cash for common shares allotted		
April 30	Capital stock allotted — common N.P.V.	150,000	
	Capital stock issued — common N.P.V.		120,000
	Distributable surplus		30,000
	To record issue of 10,000 N.P.V. common shares at $15 per share and the apportionment of 20% of cash received thereon to distributable surplus as per resolution of the directors		
May 13	Subscribers preferred — call No. 1	112,500	
	Uncalled subscription preferred stock		112,500
	Call made this date for $45 per share on 2,500 preferred shares		
May 28	Forfeited shares	8,000	
	Subscribers — preferred		2,500
	Forfeited shares suspense		1,000
	Subscribers — preferred — call No. 1		4,500
	To record 100 shares allotted forfeited to *X* as per directors' minutes this date		
May 31	Cash	81,000	
	Subscribers — preferred — call No. 1		81,000
	To record receipt of cash from call No. 1		
May 31	Cash	8,000	
	Forfeited shares		8,000
	To record sale of 100 shares preferred stock previously forfeited as per resolution of the directors		
May 31	Forfeited shares suspense	1,000	
	Profit on sale of forfeited shares		1,000
	To set up profit on sale of forfeited shares		

(b)

G CO. LTD.

BALANCE SHEET

as at 31 May 1950

ASSETS

Cash in bank		$324,090	
Land and buildings		120,000	$444,090

LIABILITIES

Capital stock			
Authorized			
5,000 5% preferred shares par value $100			
30,000 common shares no par value			
Issued:			
2,500 preferred shares		$250,000	
Less — uncalled	$ 52,500		
— unpaid calls	27,000	79,500	
		170,500	
Premium on preferred shares		2,500	
		173,000	
20,006 common shares		240,090	
Distributable surplus		30,000	
Surplus on sale of forfeited shares		1,000	$444,090

Note: 10,000 common shares issued for land and buildings.

Editor's note: The above solution assumes that the $80 cash received for each of the forfeited shares was in respect of past calls, and that the shares were still subject to further calls of $21. To issue the shares as fully paid would be to issue par value shares at a discount and, therefore, a violation of the Dominion *Companies Act.*

PROBLEM 2

Final Examination, October 1950

Accounting II, Question 5 (12 marks)

The management of the F Co. Ltd. wishes CA, its auditor, to prepare a statement accounting for the increase in the gross profit for the year ended 31 Dec 1949 over that for the year ended 31 Dec 1948. The following is a comparative statement of gross profit as recorded in the books of the company:

	Year ended 31st December	
	1948	1949
Sales	$2,100,000	$2,100,000
Cost of goods sold (excluding under-absorbed factory service)	1,500,000	1,462,500
	$ 600,000	$ 637,500
Under-absorbed factory service	30,000	15,000
Gross profit	$ 570,000	$ 622,500

CA has obtained the following supplementary information:

(1) The company manufactured and sold the same product in 1949 as in 1948.

(2) Sales have been analysed as follows:

	1948	1949
Contract sales	$ 600,000	$ 750,000
Regular sales	1,500,000	1,350,000
	$2,100,000	$2,100,000

(3) Cost of goods sold was determined as follows:

	1948	1949
Cost of goods manufactured		
Material	$ 765,000	$ 787,500
Labour	540,000	525,000
Factory service absorbed	270,000	262,500
	$1,575,000	$1,575,000
Opening inventory	450,000	525,000
	$2,025,000	$2,100,000
Closing inventory	525,000	637,500
	$1,500,000	$1,462,500

(4) The units sold during the two years were as follows:

	1948 Units	1949 Units
Contract sales	100,000	125,000
Regular sales	200,000	200,000
	300,000	325,000

Required:

Prepare the required statement.

A SOLUTION

F CO. LTD.

STATEMENT ACCOUNTING FOR CHANGE IN GROSS PROFIT
for years ended 31st December 1948 and 1949

Contract Sales

Selling price — constant

Volume increased by 25,000 units

Gross profit thereon on basis of 1948:

25,000 units @ $1.00 .... $25,000

(Selling Price $= \frac{600,000}{100,000} =$ $6.00)

(Cost Price $= \frac{1,500,000}{300,000} =$ $5.00)

Cost of production decreased by

$\$5.00 - \frac{\$1,462,500}{325,000}$

$= \$5.00 - \$4.50 = 50c$

.:. decrease in cost of production of 125,000 units = ... 62,500

Increase in gross profit on contract sales $87,500

Regular Sales

Volume of sales constant = 200,000 units

Decrease in unit selling price

1948 $\frac{\$1,500,000}{200,000}$ = $7.50

1949 $\frac{1,350,000}{200,000}$ = $6.75

.75c

Decrease as a result of selling price 200,000 x 75c	$150,000	
Increase as a result of decrease in cost of production 200,000 x 50c	100,000	
Decrease in gross profit on regular sales		($50,000)
		$37,500
Decrease in underabsorbed factory service Factory overhead expenses 1949 were $22,500 less than in 1948. Because the factory service absorbed is in direct proportion to direct labour and the direct labour decreased slightly in 1949, the factory service absorbed was $7,500 less than in 1948. As a result the underabsorbed factory service was decreased by $15,000		15,000
Net increase in gross profit		$52,500

PROBLEM 3

Final Examination, October 1950

Accounting II, Question 6 (16 marks)

The management of the Oil Refineries Limited consults CA in respect to certain specific problems ((a) to (d) inclusive) with which it is faced and asks his advice.

(a) The cost analysis budget of the Cracking Department indicates in summary:

	Percentage of Normal Operations				
	Shutdown	*60%*	*80%*	*100%*	*120%*
Direct expense	$3,000	$7,000	$8,000	$8,500	$11,500
Allocated expense:					
Fixed and variable	500	1,000	1,200	1,350	1,500
	$3,500	$8,000	$9,200	$9,850	$13,000
Total gallons of fuel oil put into process each week	0	60,000	80,000	100,000	120,000

The following facts are available:

Current prices: Residual fuel oil 7c per gallon, gasoline 14c per gallon.

Cracking department budget: Present operations 80% of capacity.

Cracking yield: 75% gasoline, 15% residual fuel oil, 10% loss.

Required:

Submit a computation showing whether or not it would be profitable for the company to purchase, at 7c per gallon, an additional 20,000 gallons of fuel oil for processing each week.

(b) The refinery has been offered 10,000 gallons of cylinder stock. The usual bargaining process will determine the final price.

The stock purchased would be processed into conventional bright stock and sold at that stage, since the blending unit for making finished motor oil is currently working at full capacity.

Cylinder stock will yield:

90% bright stock, 5% petrolatum, 5% loss

Current prices:

Bright stock 50c per gallon, petrolatum no market

Differential costs associated with processing 10,000 gallons of cylinder stock into bright stock are:

Solvent dewaxing	2c per gallon
Solvent extracting	2c per gallon
Filtering	1c per gallon

Required:

Submit a computation of how high a price per gallon the company can pay for the 10,000 gallons of cylinder stock and still make a profit on the transaction.

(c) The refinery has 10,000 gallons of raw kerosene and it is trying to decide whether to treat and sell the kerosene fraction or to crack it for its gasoline content.

Current prices:

Kerosene — 8c per gallon, gasoline — 14c per gallon

Fuel oil — 7c per gallon

Cracking yields:

Gasoline 85%, residual fuel oil 5%, loss 10%

Differential costs associated with 10,000 gallons of raw kerosene:

Treating 1c per gallon

Cracking 3c per gallon of gasoline produced

Required:

Submit a computation showing whether it would be more profitable for the company to sell or crack the kerosene.

(d) The refinery discovers that the market for finished neutrals is such that the present capacity does not meet the demand. An addition to the solvent dewaxing and solvent extracting units might prove profitable. The additional wax distillate stock required would be purchased on the open market at the current rate. They are considering increasing their capacity by 10,000 gallons.

Unit differential cost of increasing operational capacity:

Solvent dewaxing department — 10c per gallon put into process

Solvent extracting department — 10c per gallon put into process

Assumed yield from wax distillate:

90% viscous neutral, 5% white crude scale wax, 5% loss

Current market prices:

Viscous neutrals — 47c per gallon, white crude scale wax — 8c per lb., wax distillate stock — 35c per gallon

(White crude scale wax — 2.4 lbs. equivalent to 1 gallon)

Required:

Submit a computation showing whether or not it would be profitable for the company to add to the dewaxing and solvent extracting units as planned.

A SOLUTION

(a) Differential income and cost computations

Potential revenue — products from cracking		
Gasoline 15,000 gal. @ 14c		$2,100
Fuel Oil 3,000 gal. @ 7c		210
		$2,310
Less — cost of fuel oil 20,000 gal. @ 7c	$1,400	
differential cost of cracking department 20,000 gals.	650	2,050
Anticipated increase in profit		$ 260

(b) Margin establishing limit of purchase cost

Revenue — bright stock 9,000 gal. @ 50c	$4,500
Differential cost — 10,000 gal. @ 5c	500
Margin	$4,000

$4,000 ÷ 10,000 gal. = 40c (point of no advantage)

(c) Alternate routings

Net potential revenue — products from cracking		
Gasoline 8,500 gals. @ 14c	$1,190	
Fuel oil 500 gals. @ 7c	35	
	$1,225	
Less differential cost 8,500 gals. @ 3c	255	$ 970
Net potential revenue — kerosene		
Total revenue 10,000 gals. @ 8c	800	
Less treating cost		
10,000 gals. @ 1c	100	700
Gain from cracking rather than treating		$ 270

(d) Schedule of projected action

Differential income		
9,000 gals. viscous neutral @ 47c	$4,230	
1,200 lbs. white crude scale wax @ 8c	96	
	$4,326	
Less cost of wax distillate stock		
10,000 gals. at 35c	3,500	
Margin to apply against differential costs		$ 826
Differential costs		
Solvent dewaxing 10,000 gals. @ 10c	$1,000	
Solvent extracting 10,000 gals. @ 10c	1,000	2,000
Potential loss from differential production		$1,174